

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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June.

"Whether we look, or whether we listen,
We hear life murmur or see it glisten;
Every clod feels a stir of might,
An instinct within it, that reaches and towers,
And, grasping blindly above it for light,
Climbs to a soul in grass and flowers."—LOWELL.

Growth is the phenomenon that meets us every where in this glorious month. All the pent up forces of the vegetable world break out into their highest activity in June. Trees make more wood in these few brief weeks than in all the rest of the year. The dormant Winter, and the hesitating Spring have passed, and Summer, in all its fresh and glowing life, is every where visible. Every blade of grass, every leaf upon tree and shrub, answers at once to the quickening influence of the sun.

"The vegetable world is also thine,
Parent of Seasons! who the pomp precede
That waits thy throne, as through thy vast domain
Annual, along the bright ecliptic road,
In world rejoicing state, it moves sublime.
Meantime the expecting nations, circled gay
With all the various tribes of foodful earth,
Implore thy bounty, or send grateful up
A common hymn; while round thy beaming ear.
High seen, the seasons lead, in sprightly dance
Harmonious knit, the rosy fingered Hours,
The Zephyrs floating loose, the timely Rains
Of bloom ethereal, the light-footed Dews,
And softened into joy the surly Storms.
These in successive turn, with lavish hand
Shower every beauty, every fragrance shower,
Herbs, flowers, and fruits; till kindling at the touch,
From land to land is flushed the vernal year."

What is this strange mysterious principle that we see every where in the blooming Summer? It has been vigorously at work transforming the face of the world, yea building islands in the depths of the sea these thousands of years, always the study and the wonder of man, and yet as much hidden from his knowledge, as when the first human pair looked out upon the finished Creation. The principle of life has wrought such changes in the earth, that Adam would hardly know the dominion over which he was installed as lord. Almost every particle of the surface of the world, visible to us, has been at some time

within the organized body of some living plant or animal. It has felt the power of this principle, and been separated by it, perhaps into its ultimate atoms. We gather a handful of the black vegetable mold at our feet. It is now inert, but how many changes have passed upon it, in the last six thousand years! Had we the power of evoking from it the history of these changes, it would make one of the most interesting and instructive volumes ever written. The most of it is from the decay of plants, the carbon of which once floated in the atmosphere as a gas carried in every direction by the winds, until taken up by the leaves of plants. How many voyages round the world were completed by these particles! A portion of it is made up of minerals. Here are minute fragments of mica, feldspar, and quartz, too small for the eye to distinguish, traces of potash, soda, chlorine, alkalies and acids, only detected by the most delicate chemical tests. What rocks did they once enter into, what animal forms have they been incorporated with, and whence have they been borne in the earth's changes to their present resting place? Once, possibly, this particle dwelt in a granite boulder, and was borne from the remote North in the ice period and deposited in its present neighborhood. The lichens and mosses, pioneers among the vegetable workers, fastened upon the surface of the bare rock and drew aliment from its reluctant bosom. This particle then first entered into a vegetable form, and after a brief life and early decay, was detached from the rock by frosts and rains, and washed down to the soil. Its next adventure was among the grasses, taken up by the minute rootlets that feed their multitudinous growth. "The grass withereth, and the flower fadeth." In a single season it returns back to dust, and becomes plant-food. Again it passes into the circulation of a shrub, and sporting for a few hours in its tender shoots, is cropped by the grazing deer, and for the first time comes under the power of animal life.

The deer lives out his appointed days, and his carcass falls a prey to the fowls of the air. The particle that once culminated in the shrub, and flew swiftly on the winged feet of the deer, now flies more swiftly upon the strong pinions of the vulture. The bird of prey in his time dies, and our errant particle again fattens the soil, preparatory to entering into new combinations and organized forms. Here, in this handful of earth, we have not unlikely the stranded wrecks, or portions of them, of thousands of once living forms. It has been disintegrated from the solid rock, nurtured the life of the lowly mosses, luxuriated in the grass, flourished in the shrub, nurtured the beast of the field, and the fowl of the air, burrowed with the mole, and soared with the eagle. Thus the wonder working principle of life has sported with all that outer crust of the earth that we call the soil. We see its fairy creations, the verdant meadow, the waving fields of grain, the

plumed spikes of grass, the tasseled corn, the nodding lily, and the blushing rose, in the vegetable world, and we admire its handywork in the nobler forms of animals, the sturdy ox, the graceful horse, the beasts of the field, and the fowls of the air.

And here we come again, in the opening Summer, into closest contact with this mysterious principle; the heavens above us, the earth around us, and the waters under the earth are full of it, yet no man is able to define it. Life is so fresh in field and forest that there is no visible sign of decay. Yet all the hopes of the husbandman are wrapped up in this strange thing we call life. Without it, his fields are barren, and his costly acres unproductive property. With it, he has more than the power of the fabled Midas, turning what he will into gold. On every acre he may open a mine, quite as productive as the placers of our Pacific shore. How few of those have yielded a hundred dollars to the acre; yet this is no uncommon feat of husbandry in the least favored of our States. He may not be able to sow dragon's teeth, and see armed men rise up from the soil to desolate the earth, but he can do a greater deed. He can stamp on the ground, and see lowing herds, white fleeced flocks, and neighing steeds rise at his bidding, animals more perfect in form, more profitable in their yield of milk, wool, and labor, than any the nations of antiquity ever saw. The deed is none the less wonderful, because it is not instantaneously performed. The ages of fable have passed, only to be outdone in these days of fact. The dreams of poets and the speculations of philosophers are more than realized in the achievements of modern husbandry.

Though we know little of life, we do know something of its laws and the conditions of its development. These are open for our study, and the knowledge of these principles that foster the growth of plants and animals, makes the successful farmer. Every season has its facilities for this study, but none is so important as these young fresh days of Summer. Now we are enabled to test our own theories, and the wisdom of our practice, as we see life bringing out the results of our labors. The new fertilizer is put into Nature's laboratory, and the report which vegetable life makes of its qualities must be considered final, whatever becomes of the theories and reports of the chemists. The new crop, or the new method in cultivation must abide the same test. It is by close observation, studying the phenomena of vegetable growth around us, that we shall become better cultivators and make husbandry more profitable. The practical results already realized by the application of mind to agriculture give the highest encouragement for further research. There are secrets yet locked up in the soil, which discovered, will enable us to double the certainty and the measure of reward for labor; and every fact carefully noted, opens the pathway to their attainment.

Calendar of Operations for June, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 35° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.]

EXPLANATIONS.—*f* indicates the first; *m* the middle; and *l* the last of the month.—Doubling the letters thus; *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the first to the middle of the month.]

Farm.

The hoe and the cultivator would be appropriate emblems of the work for the farm this month. Vegetation now pushes forward with rapid growth. Not only are the staple crops taking firmer hold of the soil, and expanding with cheering promise, but ragweed, daisy, dock, thistles, and a numerous horde of foul weeds also feel the quickening sunshine, and send out their hardy roots to rob the field and vex the husbandman. These are to be subdued; and, scarcely less important, the soil needs frequent stirring, to keep it in right mechanical condition. The roots of plants require air and water. If the surface become crusted, evaporation is obstructed, the moisture from the deeper layer of the soil does not rise freely, and the air and dews can not readily enter from above. The organic matter decomposes but slowly under such circumstances, the plants are stinted for nourishment, and their growth is checked. Hoeing by hand or by horse power, is the remedy for weeds and for a hide-bound soil. There may also yet be vacant spots to replant with corn, or to fill with other seasonable crops. He who has a mind to work, will now find enough to employ him.

Barley usually succeeds best sown early, but may still be put in, *ff*. It prefers a gravelly soil, which should be deeply worked, and free from weeds. It may well follow a hoed crop. Sow from two and a half to three bushels per acre, and harrow in thoroughly.

Barns and Sheds—See that they are in order before the busy haying season comes on. Arrange the bay-way platforms to keep the hay from the ground and allow ventilation. If hay has spoiled, remove it to the manure heap. Examine grain bins, wool closets, and cattle stalls, for vermin, and cleanse if necessary.

Beans—Plant, *ff*, where corn has failed, if seed of King Philip or other early variety of corn can not be obtained.

Bees—Read full directions under "Apiary" on another page. Be cautious in adopting "patent" hives; many of these traps puzzle the bees sadly. It will be time enough to procure Italian bees when they have been thoroughly tried by those who can afford to experiment with them. It is possible to be stung by handling them too freely while held at the present high prices.

Beets—Sow Mangel Wurzel and Sugar varieties, *ff*, *m*. Read "Hints on Root crops," page 175.

Boys will be ambitious to do men's work. Do not allow them to exceed their strength. Give them good tools, allow them frequent rests, and remember "All work and no play, makes Jack a dull boy." Make farm life attractive if you would have them remain in the business.

Buckwheat yields a quick return, and is an available crop for lands too wet for Spring plowing. It may also replace corn destroyed by worms or other casualties. It may be sown, *ll*, but the first or second week of July is preferable in this latitude, as it then has the cooler weather of September for filling. Make the soil fine and mellow, and use half a bushel to three pecks of seed per acre.

Butter—This is one of the very best dairying months, both for quantity and quality. The new growth of grass is plentiful and tender, and the cows if well cared for, have come up to full condition. Observe scrupulous cleanliness in every department. Keep the milk and cream at a temperature of from 62° to 65° Fahrenheit. Let all butter be well worked. See that the cows are milked rapidly, and perfectly dry. Let butter for market be put up neatly, and plainly marked with the owner's name. Read article on page 175.

Cabbages—Cultivate among the rows frequently—they can scarcely be hoed too much. Plant out for late crops, *m*, *l*. They may be set between the rows of early potatoes which are to come off, *ll*, or the first of July. Good after culture will bring them forward in season, and thus two crops will be secured. Use plenty of stable manure, but none from the pig pen. Sprinkle the plants with air-slacked lime or leached ashes, to prevent green lice (aphides) and other vermin.

Carrots may still be sown, *ff*, for Winter use—they will pay as food for cattle or horses. Hoe and thin early, leaving them six inches distant in the row. Some extensive

cultivators drill in carrots between the rows of onions, after the second or third hoeing of the latter. If this be done, leave every third space vacant, to give room for curing the onions when pulled.

Cheese—Read again the Prize Articles on the Dairy published in last Vol. Watch carefully those in the cheese room, to keep out flies.

Corn—King Philip or other quickly maturing varieties may be planted, *ff*, to replace failures or otherwise. Manuring in the hill will give it a rapid start. Thorough culture should be given to the growing crops this month, to subdue grass and weeds before the corn roots have extended far from the hill; when later plowing and hoeing would injure them. Leave the surface nearly level. Allow not more than four stalks to a hill—many successful growers leave but three. If the pasture ground is limited, put in a good quantity of corn broadcast or in drills, for feeding green. See article "Remedy for Short Pastures" page 175.

Fences—An occasional survey of all on the premises is necessary for the safety of the growing crops.

Grain Fields—Cockle, thistles and other weeds may now be seen plainly. Pass through the fields after rain while the ground is soft, and root them out. This should be done especially in the best parts of the field, from which seed for future sowing is to be selected. Winter grain will be ready for the reaper in some localities, *ll*. Cut it before fully ripe—when the berry is advanced enough to bear moderate pressure of the thumb nail without breaking, or just after it leaves the "milk" stage. The weight will be greater, and the flour better than from grain ripe enough to shell.

Haying should commence as soon as the seed begins to form on grass, or clover, that is just as the bloom passes away. After this, part of the nourishing matters of the stalk change to woody fiber. Hay, especially clover, cured without much exposure to the sun, will be sweeter. Put it up in narrow cocks, and provide hay caps for protection from rain. A farmer having much meadow, who has no mowing machine, is behind the times. The horse pitchfork will also expedite the work.

Hoeing will be the main work of the month, on many farms, as already noted. Use horse power where the ground will admit of it.

Manures—Roadside weeds, and sods from waste corners will add much to the manure heap, if properly prepared. Keep a supply in the pig pen, and also in the cow yard. They will absorb and save the liquid excrements, and wash from the droppings. If an animal die, turn it to account, by covering with a mound of muck or loam.

Millet—Sow, *ff*, *m*, if not done previously. It will afford a supply of green fodder, or add to the store of Winter feed.

Peas fed green with the straw, or ripened and ground, are considered excellent food for swine. They will at least afford a change relished by the animals. They may still be planted, *ff*.

Potatoes—Keep free from weeds, but leave the roots undisturbed by the plow after blooming. Hill them up only moderately if at all.

Poultry—Allow them to range, if no injury is done to the garden or growing crops. Collect the eggs regularly. Fowls will lay more freely if allowed a little grain daily. Break up the nests of those that show an inclination to set; the chickens will in most localities be too late for profit. If they are confined to the poultry house or yard, give them plenty of green food to peck at, or allow them to ramble an hour before going to roost. Keep their apartments clean, and use the droppings mixed with plaster, in the garden.

Pumpkins—Put in vacant spots, *ff*, they will have a chance for ripening, though somewhat late.

Sheep—Wash and shear, *ff*, if not already done. Read article on page 170. Ewes and lambs will do better separated from wethers and from all other stock. Keep burdocks and thistles from the pastures. Examine lambs that have been docked or castrated, for maggots. If any are found, apply tar, or spirits turpentine. Have every sheep marked immediately after shearing. Lampblack wet with turpentine and mixed with oil, is a cheap and serviceable mixture. Give a special mark to ewes yielding the best fleeces, and reserve them for breeders. Sulphur fed with salt, will, if it is said, expel ticks and other vermin. Guard against dogs by attaching a small bell to every tenth sheep.

Sorghum—Drill or sow broadcast, *ff*, for cutting and feeding green. Cultivate that planted last month, the same as corn. If a crop is in cultivation for syrup, examine apparatus best adapted for grinding and evaporating. Much was lost last year by improper management.

Stock—Seek to improve by constantly selecting the best for raising, and by using none but good males.

Swine—Keep them out of the highway. Every farm should, if practicable, have an enclosure with running water, for their use. Allow them the range of the orchard to devour grubs and fruit infested with worms. If kept confined, give them plenty of green food, with sods, muck, leaves, and straw, to amuse themselves in rooting and manufacturing manure. Have no more than can be kept growing. Mix ground feed with wash from the dairy, and allow it to ferment before using.

Tanner's Bark—Peel from hemlock and oak, *m*, *ll*, and stand it up so as to afford protection from rain and allow to dry rapidly.

Tools, particularly for haying and harvesting, should all be put in readiness. A poor implement wastes the strength, does poor work, and is a constant discouragement.

Turnips do better sown next month.

Weeds—Nip them before they bud. A day's work in subduing them now, will accomplish more than double that time spent after weeds have become established, besides the better chance afforded to the growing plants.

Orchard and Nursery.

Cultivating is the main work of the month in these departments. The same conditions of soil which promote the growth of corn and potatoes are favorable to the production of vigorous trees and perfect fruit. Many orchards which now bear only in alternate years, would, if properly treated, yield a full crop yearly. A heavy sod, or an exhausting burden of grain will not allow free growth of the orchard. Root crops are less injurious, as the manuring and hoeing will be of partial benefit to the trees.

Fruit culturists have special interest in the preservation of birds. As forests diminish, insects make their way to the orchard, and are kept in check with extreme difficulty, unless the birds are permitted to pursue them unmolested. Encourage the robin, the sparrow, the wren and other feathered friends to make their homes in the orchard.

Budding is better done next month in this latitude; at the South it may be commenced, *ll*. Remove suckers from trees budded last year, and keep the growing buds tied up, to prevent their being broken off by their own weight, or the wind.

Caterpillars if left unmolested until now, are plainly visible; their nests disfigure the trees, and their depredations on the leaves are serious. Destroy them at once.

Evergreens already planted, will receive much benefit from mulching, particularly if the weather be dry. They may still be safely transplanted, *ff*. Observe the precautions noted last month. Read pages 178 and 179.

Fruit injured by insects, falls easily from the tree, and should be gathered and fed to swine, or destroyed, to prevent multiplication of the young vermin. Allow swine the range of the orchard and fruit yard. Thin out fruit that has set too thickly. If very few specimens of any sort are desired, leave but few to be ripened. Protect choice cherries from birds by netting or gauze spread over the branches. The occupants of a wren house set in or near a fruit tree, will aid in keeping away strange birds.

Grafts—Examine and loosen any bandages cutting into newly grafted trees. Replace cement or grafting wax that has cracked or peeled off. Remove suckers.

Hoeing—The plow, horse-hoe, or cultivator will almost entirely do away with work by hand in the nursery rows and the orchard. Avoid barking the trunks of trees by passing too closely with the plow. Use the hand hoe to remove grass and weeds immediately about the trees.

Inarching of grafting by approach, as described last month, will be in season.

Insects—Read "Insects and Fruits" in this paper, and follow suggestions.

Layer, *ll*, new growth of deciduous and evergreen trees. It was fully described and illustrated last month.

Manure should be spread on the surface as far as the roots extend. Give a generous quantity of well decomposed muck, or composted barn yard manure, to be manufactured into good fruit.

Mulching is beneficial on open soils, especially for newly planted trees, and in a drought. Cover the whole ground or as far as the roots spread, with half an inch of short straw, tan bark, or other suitable material.

Pruning—Leave it mostly, except for evergreens, until next month. The shoots of bearing trees may be pinched back to induce fruit buds, or to ensure a good shaped head.

Scale—The young are now exposed, and may be easily removed by scrubbing with strong soap suds or potash and water. Strong lye will answer. A tree can not thrive where they are present, and they spread rapidly.

Seedlings, especially evergreens, will require shading

from very powerful sunshine. Give water at night occasionally if there be drouth.

Water newly planted trees, if very dry, and mulch, to retain the moisture and prevent the surface from crusting.

Weeds should not be allowed a place in either nursery or orchard.

Kitchen and Fruit Garden.

The properly cultivated garden is now yielding its first products. Early greens, asparagus, rhubarb, lettuce and radishes, etc., have added to the attractions of the table; strawberries give promise of an early treat, and the rapidly growing vegetables and fruits that fill a well assorted collection, will keep up the pleasant succession throughout the season.

In the necessary labors of hoeing, weeding, bug trapping, etc., the boys of the family may well receive their first practical lessons in soil culture. They will be proud to exhibit the results of their efforts if they are entrusted with responsibility in some of the simpler departments, and encouraged by judicious praise. A fine bed of carrots or beets will be their certificate of industry and painstaking, a large melon will equal a medal; thus the right growth of the household will keep pace with growth in the garden.

Asparagus—Keep all weeds down, and the surface loosened by frequent hoeing. Do not continue the cutting later than the tenth of the month; late cropping injures the bed.

Beans—Train running varieties to poles or trellises. Do not hoe when wet, avoid throwing earth upon the leaves. Early Kidneys and Limas may still be planted, if.

Beets—Put in, if, all not sown for Summer use, and, m. l. for Autumn and Winter crops. If the ground become crusted after sowing, water the rows at night, to allow the young plants to push their way through. Hoe and weed as soon as the rows can be distinguished. Thin out early. The young plants are excellent "greens." Continue to thin as they advance in growth, leaving them finally six to eight inches distant in the row.

Blackberries and Raspberries—Keep all properly secured to stakes and trellises, and train the new growth as it advances. If specimens of extra large fruit are desired, thin bunches already set, leaving but few in the cluster.

Borecole, Brussels Sprouts, Broccoli, Kale, etc.—Transplant for late crops, f, m.

Cabbage and Cauliflower—Sow seed, if, for latest transplanting. Set out, f, m, for Autumn, and, ll, for Winter use. Frequent and thorough hoeing will induce rapid growth. The cut worm and other insects must be watched and destroyed. Replace stunted plants, or those eaten off by vermin.

Carrots will succeed well if sown, if, though last month was more favorable. Destroy weeds before they become troublesome. Thin early to six inches apart in the rows. If left too long, they run up spindling, and fall and are checked in growth when thinned.

Celery—Set plants for the general crop, in trenches, m, l, watering and shading as long as needed to prevent wilting. Some gardeners prefer setting their celery plants upon the surface, in deep rich soil, leaving it to attain a large growth of leaf, and then hilling it high, to blanch the stalks.

Corn—Continue to plant at intervals of ten to twelve days, to prolong the season of supplies for the table. Vacant spots or plots from which early vegetables are ready to be gathered, may be planted, to be cultivated after the first growth is removed.

Cress—Sow, f, m, l, for a constant supply.

Cucumbers, Melons and Squashes—Replant where destroyed by insects. Put in cucumbers for pickles, m, l. Examine early every morning for striped bug and other insects, and apply the thumb and finger remedy. See article "Death to the Bugs" in this number.

Currants—Pinch off suckers, and straggling shoots on those trained to a tree form, which is preferable. Examine leaves for the "Currant Aphs" described in April *Agriculturist*, page 109, and syringe with whale oil soap, or apply lime or ashes. Water the bushes with soap suds and other sink wash.

Egg Plants—Transplant, if, for full crop, and, m, for later bearing. Set them where they may have the full benefit of the sunshine, and give frequent hoeings.

Fruit—Take off nearly or quite all from plants or trees set out the present season. The strength of the plant is needed to recover from the check caused by removing. Thin out clusters from over bearing trees or bushes. Protect from birds with netting. Bright pieces of tin suspended in trees or around the fruit plot, will frighten away many of the feathered plunderers.

Gooseberries—Keep down all weeds, and the surface around them well hoed. Mulch with tan bark, salt hay,

or saw dust. Keeping the surface of the ground shaded and moist, aids in preventing mildew. Thin out the fruit to increase the size of the berries.

Grapes—Do not allow the rapidly growing vines to become a tangled mat of foliage. Remove all shoots that interfere with proper training. Where several push out at a single joint, leave only one or two. If more than two bunches of fruit set on a single spur, thin them out, one bunch alone will yield finer fruit. Pinch off the ends of the bearing branches at two or three buds beyond the last cluster. Examine carefully for insects, and apply the remedies recommended for other plants.

Insects—Read articles on subsequent pages.

Lettuce—Sow and plant out at intervals of a week to keep up a succession of young and tender leaves. Transplanting favors a compact growth of the head. Hoe after the dew is off, and avoid throwing dirt among the leaves.

Onions—Weed and hoe frequently. Thin to three or four inches in the row.

Parsneps and Salsafy—Hoe and thin, if, m, the same as for beets and carrots.

Peas—Plant, if. They are less troubled by the weevil or pea bug, than those put in earlier. Cover two or three inches deep. Keep well hoed. Supply with bushes or with stakes and twine for their support, before they fall to the earth or clasp each other with their tendrils.

Potatoes—Hoe and weed thoroughly. Dust freely with ashes or air slaked lime, to repel insects. Plant cabbages between the rows of the early varieties, to come on after the first crop is removed.

Radishes—Sow at intervals between rows of young carrots, beets, etc., among hills of cucumbers and melons, and other unoccupied corners.

Rhubarb—A full supply may be kept by pinching off the seed stalks as they appear. Keep the ground around them well loosened and free from weeds. A barrel with both heads out, set over a plant, will cause its leaf stalks to grow long and tender.

Spinach—Sow, f, m, for continued supplies. Turn under early crops, and replace with fresh sowings or other vegetables.

Strawberries are often injured by being beaten down by rains into the soil. Clean the bed from grass and weeds, and spread tan bark or cut straw between the rows, and under the plants. Read article "How to pick Strawberries" on page 181.

Thin out all plants, vegetables, and fruits that require it; there is no profit in crowding the ground.

Tomatoes—Transplant, f, m, for late use. Train them on trellises or frames as described last month. Shorten the branches after the blossoms appear, and keep them pruned, to prevent a bushy growth. The yield will be greater, and the fruit improved in size.

Transplanting can be performed with success upon any plant, if sufficient care be taken to keep the roots unbroken, and the soil loosened on the surface, after the plant is reset. In this way, missing hills of corn, beans, and even melons and cucumbers may be replaced. Choose cloudy or wet weather, or towards evening for the operation, and give shade if the sun be very powerful.

Turnips—Sow, if, m, for Summer use. Those for Winter stores may be left until July. Dust the young plants with ashes or soot, to keep off insects. Thin out, and keep free from weeds.

Water plants lately removed, if the ground be dry. Open a hole near the plant, turn in the water, and replace dry earth. This will prevent crusts of the surface. Where this is not practicable, sprinkle from a watering pot, or garden syringe, at evening.

Weeds in the garden proclaim neglect by the gardener. Allow none to make a mark against your industry. Keep the hoe polished by destroying them.

Winter Cherry (*Physalis*)—Transplant from the seed bed, f, m. If plants are scarce, they may be multiplied by cutting off branches and setting them in good soil; they take root easily. Seed sown early may yet germinate. It sometimes lies dormant several weeks before vegetation.

Flower Garden and Lawn.

If properly arranged and well cared for, the Flower Garden, Lawn, and Shrubbery, are very attractive now. While enjoying the fragrance and beauty of the blooming plants, the fine deep green foliage and pleasing outline of the evergreens, the gracefully winding drive among flower borders, massing plants, stately trees, blooming shrubs, and the rich glossy lawn, one feels amply repaid for the labor bestowed upon this department of ornamental gardening, and, if favored with ample means, resolves upon still further improving and extending these grounds, alike the pride of the owner, and the delight of visitors.

The labors of re-arranging the old, or forming new grounds, planting trees and shrubs, sowing seeds, and

otherwise preparing for a summer bloom, have been completed, and a brief rest may be taken. Not long, however, can the florist be idle, for a volunteer crop of weeds, and flowers not wanted, have already sprung up, and are striving for the mastery. They would soon entirely overrun the delicate flowers, if left unchecked. With hoe, rake, and weeding knife, the gardener must commence a war of extermination during this growing month. Nor is it sufficient to merely keep down weeds. The ground should be frequently stirred, or it will crust or bake upon the surface, shutting out air and dews from the roots, and turning away the rain which should penetrate the soil. A fine toothed rake is a good implement for lightening the surface, and at the same time disturbing the weed seeds about sending up their shoots. Besides keeping down the weeds, there are many plants to be removed or thrown away; it is impossible to have healthy foliage and a fine bloom in crowded grounds.

Some of the early flowering bulbs have finished blooming, and may now give place to other plants. It is not too late to sow many of the quick growing annuals, or those sown last month may be transplanted in their place.

Bedding Plants—Complete setting verbenas, geraniums, petunias, pansies, daisies, dicentras, etc., if.

Box Edgings may still be set, if, m. Trim or shear old borders, m, l, on damp or cloudy days. Keep well hoed, and replace any unsightly or defective plants with those of thrifty growth.

Bulbs—Lift, ll, those to be reset in the Fall. Dry them in the shade, and lay in drawers or wrap in papers, carefully labeling.

Carnations and other Pinks—Keep well tied up while in bloom. By shading with a muslin screen during mid-day, the flowering season may be much prolonged. Layer and make cuttings, f, m.

Climbers of all kinds should be kept well secured to stakes or trellises. If to be laid down in the Fall, do not allow them to twine in such a way that they can not be easily removed. They should be kept from passing and repassing through the meshes of wire or slat lattice work.

Dahlias—Plant out any remaining roots, if, watering freely. Stake up those set last month, leaving, at most, but two shoots to a root—one is still better.

Evergreens may still be set out, if, m. Remove them with earth about the roots, when practicable, and water freely at the time of setting. Those set last month, will do better if watered during dry weather.

Flower Stalks—Cut away as fast as they are out of bloom. They have an unsightly appearance when left in the flower border. They should give place to the later growing annuals.

Geraniums—Plant out, if, any remaining in pots. They mass finely, either in distinct colors, or when mixed.

Gladioluses—Stake, ll, those put out last month.

Grass Edgings, or Borders—The grass is now growing rapidly, and needs frequent clipping and an occasional trimming or paring at the edges, to prevent its extending into the beds or paths.

Gravel Walks—Keep free from grass and weeds, raking and rolling frequently. Add fresh gravel to old paths.

Hedges—Clip, m, l, rapidly growing deciduous, and even evergreen hedges.

Hoes should not be idle during this growing month. Keep them in constant use, hoeing up weeds and loosening the soil.

House Plants—Green-house, hot-house, and parlor-plants have nearly all been transferred to these grounds, some of them for summer blooming, others to attain a flowering size by the time they are returned to the houses in the Fall. Some have been planted out, while others are plunged in the earth and should be lifted, pot and all, and turned so as to separate any roots extending through the hole at the bottom. Pinch back freely, to form fine bushy plants.

Insects are now providing for future broods. Foretell their operations by destroying the parent stock.

Lawn—Keep the grass in a fine thick mat by cutting often—at least every fortnight. See article upon cutting grass, on page 180. Do not allow grass or weeds to grow about the trunks of small trees, particularly those newly planted. A circle of from four to six feet in diameter, with the tree as a center, should be kept well hoed or raked over. Cut the turf smooth and even, in a true circle, and remove the earth around the edge for a few inches in depth, raising a slight mound about the trunk. To make it still more ornamental, a few verbenas, petunias, salvias, or other flowering plants, may be sparingly planted upon this mound. They will injure the tree far less than the closely matted roots of different grasses. If the grass has a weak, unhealthy appearance, give a top dressing of bone sawings, guano, or a sprinkling of liquid manure.

Roses are the pride of the flower garden in June. From the low growing Tea to the standard Bourbon, June, Pil-

lar and Prairie Climber, red, pink, blush, lilac, yellow, and white roses, are in full flower, shedding both beauty and fragrance. If the border contain but a single specimen, let that be a Remontant rose. Bugs, slugs, and leaf hoppers will dispute with you their possession. The rose-bugs may be destroyed by shaking them into a shallow basin of hot water, or by hand picking. Whale-oil soap, dissolved at the rate of 1 pound to 3 gallons of water, will destroy both slugs and thrips. Pour it on from the rose of a watering pot, or use a hand-syringe with a sprinkler attached. In the absence of soap, each morning while the dew is on, dust with wood ashes, and the slimy green worm, which is eating out all the substance of the leaf, will soon disappear. A single application of either of the above remedies is not sufficient, as successive broods continue to hatch out.

Transplanting many of the early sown flowers is now in order. Select a cloudy day before a rain, if possible, and take up plenty of earth, carefully, with the roots, using the trowel, and the plant will receive very little check. If done in dry weather, water freely, both before and after the operation; the evening is the best time.

Verbenas and Petunias now make a fine show if a good collection was put out last month. They may still be planted, ff. By pegging down the verbenas, a large mass or mat can be formed from a single plant.

Water trees and flowers recently transplanted, if the month prove dry. Nature's own showers are best, however, and a good stirring of the soil to help draw moisture from below, and retain that which falls upon the surface, will usually answer all purposes, except for transplanted shrubs, trees, and flowers, or for newly turfed edgings.

Green and Hot-Houses.

These have mainly been emptied of their plants, which now grace the flower borders. In extensive collections, the more tender plants are better managed in than out of the house, and on that account are still kept upon the shelves. They now require abundance of air and plenty of water. The upper ventilators should be kept open during fair weather. Opening both upper and lower would dry the atmosphere too rapidly. Look well to the pots which have been set in the yard with their contents undisturbed. See that they are shielded from high winds, and watered as needed.

Azaleas are now making a rapid growth, and need abundance of water, and some pinching in.

Bud, m, l, oranges, lemons, citrons, shaddock, etc.

Camellias do quite as well in the open border, to which they may be carried, ff. If retained on the shelves in the house, water and syringe often. Watch for and check the approach of insects. Cut back to a bushy well formed head.

Cuttings of Chrysanthemums, Myrtles, Hydrangeas, Fuchsias, Geraniums, etc., may be made and potted, fm.

Geraniums are in full flower, and should be watered freely. Insert cuttings and make layers to increase the stock of desirable kinds.

Grapes—The early houses will now be ripening their fruit, and the syringing overhead must be omitted. Some of the later crops need a further thinning, while others, with little forcing, are only in flower. Pinch back bearing shoots to three leaves, at most, beyond the bunches, and rub off superfluous shoots. Air freely, and water as required.

Layer and Inarch cuttings and other plants which do not root readily from cuttings.

Potting—Many of the rapidly growing plants will now require more room, and should be transferred to pots of a larger size. Have a good supply of properly prepared potting soil at all times in readiness. Two parts leaf mold or well decomposed muck, one part garden loam, one part fine sand, and one part finely pulverized and well rotted manure, make a good soil for potted plants.

Seedlings of sufficient size, should be transplanted either to small pots or set in the open borders.

Verbenas and Petunias—Make early preparation to increase the supply of young plants by layering and putting in cuttings for in-door blooming next Winter.

Water—Give as may be wanted. A little may be necessary night and morning upon plants in small pots in a dry atmosphere. Examine after rains to see if drainage is perfect.

Apiary in June.

BY M. QUINBY.

June is the swarming month of the season. Any one wishing to increase his colonies to the utmost, must secure at least one swarm from each stock that is sufficiently strong. Occasionally a good stock will exhibit all the indications of swarming, and yet refuse to leave; if it is determined to make the most of such by artificial swarming, do it now, otherwise, the chances of rearing a queen are greatly diminished. If done at the right season, with

proper precautions, there are some advantages over natural swarming; yet the trouble of making such, is often a little more than the *hiving* of a regular swarm. In artificial swarming, as the old queen is to go with the swarm, it is well to give the old stock from which she is taken, a finished queen-cell, that a young queen may take the place of the old one, and as little time as possible be lost in breeding.

Within a week after a first swarm has issued from a stock, examine it and see if a sealed queen-cell can be had. As long as such cells may be obtained, it will generally do to operate. The bees may be kept quiet by the means mentioned last month. Just before dark, is perhaps a little better time to operate, than in the morning. If it be a common hive, and the bees are outside, raise it carefully without any jar, and set it on small blocks; sprinkle the bees moderately with water, and gently disturb them with a small stick until they all enter the hive. Have ready to receive the bees a hive that has a bottom very nearly the size of the old one. Turn the full one bottom up, and set the empty one over; stop all openings that will allow a bee to pass, with rags or paper. Rap on the lower hive with a stick or hammer a few times, lightly, but enough to arouse them thoroughly, and then leave them quiet about five minutes, for the bees to fill themselves with honey. Now bent the hive eight or ten minutes, not striking hard enough at any time to detach the combs. By this time, the bees will have lost all disposition to sting, and the upper hive may be raised to inspect progress. When about two thirds are up, they are right. Set the new colony on the stand for fifteen or twenty minutes; if the queen is there—as she will be nine times in ten—the bees will be quiet, otherwise, uneasy and running about in search of her, when it will be necessary to drive again, using for the purpose another hive.

If both hives are of one color, set the old one about two feet in front of its former stand; if of different colors, a little more distant. Should there be room on each side of the old stand to set them, let each be about eighteen inches from it. Before turning over the old hive, ascertain if possible, if it contains any finished or nearly completed queen cells—this is a convenient time, while but few bees are in the way—if such cells are not there, it will be necessary to introduce one obtained from another hive. It may be put in now, at the bottom, or the next morning at the top—opening a hole for the purpose.

There is much risk in depending on the bees rearing a queen, especially if they have none started, and it is near the end of the swarming season. They will sometimes destroy a cell that is given them, in which case it will be necessary to supply another. With the movable frames, the middle of the day is preferable for operating, as fewer bees are in the way when looking for the queen. Look for her on each comb as it is taken out, and when found, put the frame containing her with the bees on it, in the new hive, and set this on the old stand. If no well advanced queen cells are found on any of the combs, put one in the hive somewhere, as before directed, then remove the hive to any convenient place, away from the old stand. The bees returning to the old stand, will form the new colony, and enough will remain in the old stock, to keep that in good condition.

When the season is a very good one for honey, bees in the common hive are quite apt to swarm too much. Second swarms the last of the month, are seldom of much advantage—with the movable combs they may be kept back. Five or six days after the first issue, open the hive, and cut out all the queen cells but one. When two second swarms are united, they are about equal in number with one of the first. Third swarms are ordinarily half as large as the second, and should be returned to the parent stock when practicable, (for directions, see *Apiary for June 1859*), if not, try and unite with others, till you get a strong colony—one such is worth half a dozen weak ones. Where there are many old stocks, it would be well enough to save three or four queens, with a few hundred workers with each, to supply colonies that will be destitute after it is too late to obtain cells. When a queen is lost from an old stock, it usually happens two or three weeks after the first swarm; with young swarms it occurs in from one to ten days, and generally with those that are accompanied with young queens. It is nearly always manifested the next morning afterward, by the uneasiness of the bees: they will be seen running about while others are quiet. In such cases, a queen, or a cell containing one, introduced, will make all right. Boxes for surplus honey should now be put on all hives where the bees are crowded. Pieces of clean white comb fastened in the top of each box with melted wax, are very important. If plenty is on hand, let these pieces be large, but divide it if necessary, to supply all. If old colonies can be induced to commence in the boxes before they swarm, they are quite sure to continue afterwards, and often fill them under circumstances where they would not make a beginning.... In putting on and taking off boxes, tobacco smoke will keep the bees quiet with the least

trouble.... New swarms, when very large, unless near the end of the season, may receive the boxes immediately on being hived. With those of ordinary size, it is as well to wait three or four days, or until just before the hive is full.... Glass boxes, which are the best for market, must have an outer cover to shut out the light; but for those of wood, only a shelter from the rain and sun is necessary. If any old stocks, (by this term I mean any that have been wintered) do not increase as they should, ascertain the reason. If they have no queen, give them a small swarm with one; if diseased brood is found, drive out the bees to begin anew. Keep all honey that such hives contain, from being taken by other bees.... Remove all combs from the Apiary that have not bees enough to protect them from the moth.... Any combs to be saved for future use, may be smoked with brimstone occasionally, to destroy the moth worm.

Moving an Asparagus Bed—Splendid Asparagus.

There is nothing produced in our garden which we would not sooner part with than our asparagus. We have had a fine old bed which has yielded a daily abundance for our table, and some to spare. But in changing our grounds the present season, this favorite bed chanced to be right where we wanted a magnolia tree on a new lawn. We hesitated long about disturbing it, as it had just commenced giving the usual supply. But we finally decided to dispense with its use for this season, as we supposed. Accordingly, on the 10th of May, we laid out a new bed, 15 by 30 feet, cutting deep wide trenches across it, and scattering in a liberal supply of crushed bones for a permanent manure, with a small addition of bone sawdust for immediate effect. The old bed was then thoroughly watered, and the earth taken up in masses of a peck, to a half bushel or more, each mass containing a cluster of roots. These clusters were transferred to the trenches, and again watered, and earth filled in around them. The very next day new shoots began to appear, and now (May 17th) the new bed is yielding just about as good a supply as before the change of location—to our no small surprise and gratification.

We thought we had as good asparagus as any one—the real "giant" kind, made so by good soil and plenty of manure—but we must own up beat. The evening of the very day we moved our bed, as if in anticipation of our necessities, Mr. Henry J. Smith, of Richmond, Va., sent us in by express, (charges all paid,) a large bucket filled with bunches of the finest asparagus we have ever seen. The stalks, 8 to 10 inches in length, and 3 to 3½ inches in circumference, were blanched white, and were so tender and brittle, that they would hardly support their own weight, when lifted by one end. They were crisp, clear to the bottom end. The bunches were wrapped in dampened muslin, and holes were bored in the bucket lid to admit air. Though they were three days in reaching our country residence, they were in excellent order, save a little sourness of some of the stalks, which was entirely removed by adding a trifle of soda to the cooking water. Mr. Smith will lay us under still greater obligations, if he will describe to our readers his method of producing such asparagus.

What to Plant in Vacant Spots.

In a well assorted garden, very little ground will be left unoccupied throughout the whole season. As one crop is gathered another will take its place, and where poor seeds, insects, or other mishaps have left vacancies, the wide-awake gardener will be up and at work to fill them before the weeds have taken possession. It is desirable to secure a succession of some varieties,

as lettuce, radishes, peas, corn, etc. For part of these we must leave the space free until the proper time of planting; others may be dropped here and there as earlier sorts are gathered.

We may yet get a late crop of Early Kidney or even Lima beans by putting them in at once. The latter need not be lost if they should not fully ripen in the Fall; picked off while yet green and dried in an open loft, they will furnish a fine relish for a cold winter's day. Melons and squashes may still be planted and if stimulated to rapid growth by poultry droppings or guano, and shortened in to favor the growth of fruit, many good specimens can be gathered. It will be well in such cases to take off the later setting fruit which has little prospect of ripening; the strength of the vine will go to improve what is left.

Cucumbers for pickles need not be planted until from the 10th to the 20th of the month. They will have abundant time to reach the proper size before frost closes the season. The insects will find their tender shoots greatly preferable to the fibrous leaves and vines of older plants; they must be carefully watched.

Peas put in now will be less liable to attack from the weevil which earlier in the season deposits its eggs in the young fruit. It is well to reserve the principal crop to be planted about this time.

If pains were taken to secure a patch of very early potatoes as recommended in the *Agriculturist* for March, they will be ready for the table during this month. Corn for late use may be planted, or cabbages set out between the rows now; they will have room enough until the potatoes are dug, and be ready to occupy the ground left by that crop. Cabbages will also come in well where the spinach sown last Fall, has grown too large for the table; enough of the latter should be left for seed.

Beets are still in season for late sowings, and if started at once will be available for Summer use. The middle or last of the month is the right time for putting in the Winter supply. Vacant corners here and there if large enough for only a single beet will look better thus occupied, than left open, or filled with purslain or pigweed.

Turnips will also occupy an important place, and may be put in from the first of June to the middle of July, or even later.

Insects and Fruits—A Familiar Talk.

[The following dialogue was furnished too late for its regular place on the inside sheet, and being important at this season, we insert it here, though out of place.—ED.]

Young Farmer.—Well, neighbor, I am glad you happened here this morning. I have been awake an hour or more, thinking about going into raising fruit more extensively, as I read an article last evening about the profits of the business, which seemed to make it very plain that it would pay better than anything else I can do. But I have been looking at the dark side of the subject, and have hardly faith enough to plant another tree. There is no difficulty in getting and planting fruit trees, and in making them grow well, and there is a good demand for all fruit that can be raised, at high prices; but what's the use of raising a crop for insects to destroy? When I bought this farm there were plenty of old trees upon it, but my plums are stung, and fall off when half ripe; my apple, peach, and quince trees look sickly; a blight curls the peach leaves; and the caterpillar nests cluster thickly in apple, pear, and cherry trees, alike. To get a perfect specimen of ripened fruit, is a rare thing.

Old Orchardist.—I can readily appreciate your difficulties, and you are not alone in this respect.

Many others who formerly produced abundant crops of fruit, are now discouraged. Time was when nature's provisions for keeping noxious insects in check were amply sufficient to make fruit-growing an easy matter. The insects were appointed to keep in check a too luxuriant vegetation; and birds were provided to keep the insects themselves within due limits. But the balance has been destroyed; the birds have been in a measure annihilated, and the insects have gone on multiplying until they now hold almost undisputed sway. Still we can resort to other remedies, and by a continued warfare with the destroyers, we can greatly lessen their ravages. I yet find fruit-growing feasible and profitable, and an annual return of good apples, fine plums, cherries, peaches, and quinces, rewards all the care and labor required to obtain them.

Young Farmer.—I am glad to get a word of encouragement; I love fruits, and I would ask no more pleasant business than fruit growing if I could by any amount of labor succeed. Let us walk out among my trees while waiting for breakfast. . . . See that fine old apple tree. Away in the top are two caterpillar nests from which there will come forth an army of insects to riddle the leaves, and leave the tree as bare of foliage as if it had stood in a burning brush heap. This has been the case for years past, and the apples, deprived of the shade and nourishment of the leaves, have been sickly, sorry looking, half-grown specimens. I have pulled down the nests, and have shot them to pieces with guns charged with powder only, but the caterpillars build them again, as fast as I can destroy them.

Old Orchardist.—You have probably done this too late in the day. During Spring, the caterpillars gather in these nests at night, and do not leave them in the morning until the dew is off, and then they scatter over the leaves, and are safe while you pull down their house, which they at once rebuild. You should destroy the nests as soon as they appeared in Spring, and this should be done early in the morning. It is the early man as well as the "early bird that catches the worm." To remove these nests I use a spiral brush, of which here is a sketch (fig. 1). It is simply bristles twisted between wires, and can be bought ready made at the agricultural or brush stores for a small sum. This I tie upon the end of a pole, and twist it into the nests and pull them down and burn them. By following up this work carefully for a few mornings in Spring,



Fig. 1.

I have succeeded in destroying nests of the caterpillar tribe, and should have been rid of the pests long since, but from the fact that a neighbor of mine raises them in his trees, and a colony annually emigrates to my orchard.

Young Farmer.—I will send for one of these brushes, or make one, at once, and try your early-in-the-morning treatment. But what have you to say of this cherry tree just here, and that pear tree there. There are no caterpillar nests visible, and yet their leaves are riddled to skeletons, much like those shown in the April number of the *American Agriculturist*? My rose bushes are similarly affected.

Old Orchardist.—I am afraid you are not a careful, close observer, or you would have found upon these leaves thousands of the little slugs or small

green worms, tapering all the way from the head to the tail. There are several varieties of these, resembling each other enough to be cousins at least, and these do the mischief you refer to. You must make their habitations unhealthy for them, by tying a small muslin bag to the end of a pole having previously filled it with ashes or slaked lime. Shake this over the plants until they are well dusted and the slugs will "quit or die." Or you may treat them to a shower-bath thus: Dissolve a pound of whale oil soap, (which will cost but a few pennies) in about six gallons of water. Throw this upon the leaves, under and over, with a hand syringe or garden engine. This will destroy the first brood. A week or so after, another brood will be hatched, and these must be destroyed in like manner. A few applications of this kind, either the ashes or lime dust, or the whale oil soap, will dispatch the slugs and their progeny.

Young Farmer.—I will try it; the cost and labor are nothing compared to the benefit, if I can get rid of their trouble. But how about the plums? I have a fine crop started as you see, yet judging from the experience of the past two years, I shall not have a perfect ripe plum.

Old Orchardist.—Here, look at this specimen and you will see the "turk" himself—this little brownish bug—curculio they call him—that you have perhaps not seen before because you did not look sharply after him. He is a troublesome fellow at best, and so troublesome that a score or hundred men have set their wits to work to compass his destruction. We have had all sorts of remedies and nostrums proposed, patented and unpatented, public and secret, sure cures—but most if not all of them are unavailing. I have found nothing so effectual as the lime or ashes dust bag used frequently about the time the fruit sets, and until the plums are of considerable size, and the skin hard—say when the fruit is two-thirds grown. The dusting should be done in the morning, when the tree is wet with dew, and two or three times a week. You will thus get a fair crop of perfect fruit, worth much more than the trouble it costs. Some have found the whale-oil soap beneficial, applied two or three times a week as recommended for the dusting. You might try this on a tree or two and note the results. I have been satisfied with the dusting. As you have a large stock of curculios, I would advise you to try both; that is dust the trees once or more a week, and treat them to soap about as often, say three days after each dusting.

Young Farmer.—Over here are some recently planted apple and pear trees, whose trunks and larger limbs have not a bright healthful look; what is the trouble with them? Neighbor I. says I manured them too much.

Old Orchardist.—Look carefully at the bark, and you will see whitish specks or scales. There are a few large ones remaining from last year, but most of them have fallen off. I will raise one of the old ones with the point of my knife, and let you look on the under side with my pocket microscope. You see quite a mountain heap of eggs under each scale. You perhaps see one or more insects already hatched. These are the eggs of the "scale" or "bark-louse," but most of them have hatched out, and the white specks are the young insects. Washing and rubbing the bark with a cloth dipped in water, in which a little soft soap, or potash is dissolved, will



Fig. 2.

take off these "scales." To save the hands, a swab or mop may be used. All these operations take time and care, but "without pains there are no gains," and I have found nothing to pay better than the time I thus expend upon my trees.

Young Farmer.—I confess I have been a superficial observer. I have not looked closely to these matters, and until this morning have not examined the insects themselves. I shall take a new start; and I hope by next year to have trees worth showing.

Old Orchardist.—There is one other enemy to be feared, and against which it is well to exercise a little forethought. It is rather early just now, but by the middle of June, if you come into the orchard at dusk, or during a moonlight night, you will see pretty brown millers flitting about among the apple and pear trees. These are the parents of the worms found in the fruit. The millers deposit their eggs upon the tender fruit, where they soon hatch, and the little worms enter the apples or pears, causing them to fall prematurely. Several methods have been devised for entrapping the parent millers. Advantage is taken of their night flying habits, and bonfires are sometimes built to attract and consume them. Flambeaux made by winding tarred rags upon sticks, will burn for a long time when placed in the orchard and lighted. A burning lantern may be suspended in the tree, and a vessel of soap and water, or sweetened water made secure beneath it. The insects strike the lantern and fall into the water, or are even attracted by the sweets. A late contrivance, is to cover an upright square or round surface of wood or tin with phosphorus, which shining in the dark, attracts the night insects. A vessel of sweetened water is secured below it to catch those that fall, or to entrap them when drinking. A broad flat top sheds the rain. By pursuing one or all of these methods, wormy apples will be scarce next Fall.

We must pay our respects to the *borers* before going. The old worms quite likely have left the trees, but it is well to dig into their holes, close to the ground, and destroy any remaining. Our chief aim, however, should be directed towards preventing further attacks. The last of this month, or early in July is the season chosen by the winged insect to deposit eggs. She usually selects nice young trees and lays her eggs upon the bark near the roots. By removing an inch of soil and tying some stiff paper—tarred if convenient—for a foot or more up the body, replacing the earth afterward, the beetle will usually go elsewhere to deposit her eggs.

Death on Bugs.

These lively fellows are abroad enjoying themselves these pleasant June mornings. If they only had a grain of discretion, and would feast on dock and burdock, we should be content to see them thrive. But unfortunately they are epicures, and delight in squash, cucumber, and melon vines. And the finer and more delicate the variety, the more intent they are upon devouring it alive. Nothing is so savory to them as the Boston Marrow, and the Hubbard squash. They will feed upon the fat of the land while they are above ground.

How to put them under and keep them there, that's the question! They have more than a ghost's propensity to rise, and unless great vigilance is exercised, they will cut off the squashes and melons. The period of peril to these vines only lasts about ten days, and if they can be guarded for this time, they will take care of themselves. A box with a glass over the top, or

a thin piece of muslin is a perfect safeguard, and some start all these plants in boxes, and keep them there until they get the start of the bugs. But this is quite too much trouble for most cultivators who do not keep a professional gardener.

Others appeal forcibly to the instincts of the great bug family, and surround the plants with a cordon of anti-bug odors, that puts them to flight. This is a legitimate warfare, thwarting brute instinct with human cunning. A favorite application near the shore, is clams, or any other cheap fish or offal put upon the surface of the hill. A great advantage of this application is, that it is a good manure for the plants, and gives them a start after it has started the bugs.

Other experienced gardeners save their vines by an application of Peruvian guano and plaster, one part of the former to three of the latter. It is put upon the leaves, top and bottom, with a dredging box, and sprinkled upon the ground. An application should be made to the leaves after every rain. This also is a good fertilizer for the plants.

Others resort to compounds that appeal to the taste rather than the olfactories of the bug family. If he will eat and drink of the juices of these plants, they give him a bitter dose in the shape of quassia, steeped in hot water for a day or two. The quassia tea is applied every morning, or evening, until the plants are out of danger. We have tried this with favorable results. Ashes and soot are more common applications, and are in a measure efficacious. The trouble with these remedies is, that they are not applied often and thoroughly enough. Ashes will not protect the plants after they are washed off by the rain.

Whatever remedies are used, it will be necessary for the gardener to visit these plants two or three times a day while they are in peril. Examine the plants closely, and apply the thumb and finger to all bugs that have not been reached by other methods. This is the final argument, and leaves the plants, masters of the field.

Destroying Cut Worms.

To the Editor of the American Agriculturist:

A few years since, I destroyed cut worms from a field of corn, after a method somewhat similar to the one mentioned in the last *Agriculturist*. I hitched a horse to the forward wheels of a light wagon, then took two rake handles, cut them just four inches longer than the diameter of the wheels, and tied them across the wheels, so that when I drove over the field, there would be a smooth track made by the impression of the wheel for the worms to travel in, and a succession of little pits for them to fall into, made by the projecting rake handles. The next morning, on going over the ground, I found I had caught thousands in the pits. They all died in the sun before noon. If it had rained, the earth would have fallen upon them, and they would have lived. I think five to eight inches too deep; one and a half or two inches is the proper depth.

Newport Co., R. I.

J. E. MACOMBER.

Gas Tar upon Fruit Trees—Caution.

To the Editor of the American Agriculturist:

I wish to caution your readers against the use of coal or gas tar upon the trunks of fruit trees. I have often seen it recommended in the various periodicals as a preventive of the attacks of the borer, and mice. I used it myself to prevent mice gnawing the bark, and know the remedy is as bad, if not worse, than the vermin. It kept off the mice, but the tar became so hard,

that I was obliged to slit it down to give room for the tree to grow. My attention was called to this by seeing what you wrote on page 121, April *Agriculturist*, where I observe you advise against applying tar directly to the tree.

Lincoln Co., C. W.

JAMES TAYLOR.

Scientific and Practical Talks About Manures....V.

(Continued from page 107.)

From the facts and theories stated in our discussion thus far, we may now lay down as general rules: 1. All organic substances (that is, those of animal or vegetable origin.) have more or less value as fertilizers for crops. Even allowing that mineral salts are necessary, they are supplied by the various organic manures added to the soil. 3. These organic substances are valuable as fertilizers in proportion to the amount of ammonia or nitrogen they contain.

We may therefore reckon as manures: straw, leaves, hay, roots (including muck or black earth containing decayed fibres of roots, etc.) solid or liquid animal droppings, flesh, unburned bones, in short, everything that has formed a part of the organic structure of vegetable or animal growth. Every thing of this kind, produced, or found on the farm, should be carefully husbanded and applied to the soil. No cultivator desiring and deserving success, should allow a single pound of such materials to go to waste. It is much more economical to gather from the forest the leaves that lie thickly strewn upon the ground, and rot them in the compost heap for manure, than to buy the best fertilizers, or what is worse, put up with half a crop. It is far more profitable to gather sods, or black earth from the swamp or low land, and rot it with the manure heap, or with lime or ashes, than to buy even bone-dust or Peruvian guano. No cultivator can afford to buy fertilizers, while he has unused barn-yard manure, poultry droppings, or human excrements, or while a dark stream of water charged with the essence of his manure heap, is flowing off into a gully, or upon a plot of ground where it is not needed. It is more profitable to cart earth into the yard to absorb this wasting liquid, and cart it out to be spread upon the field, than to buy at a distant market, at half the price now asked for them, any of the various articles sold as fertilizers.—When all these home supplies are looked after, and properly used, then it will usually pay to buy in addition, some such fertilizer as pure Peruvian guano, or pure bone meal (not the compound of plaster or lime and bones, too often sold as pure bone dust.)

The comparative value of most of the home-produced fertilizers has already been indicated. We value them in about the following order: Solid human excrements, poultry droppings, sheep dung, horse droppings, cow manure, leaves, muck, etc. Unburned bones and urine might be placed first on the list, but bones can not well be used, except for fruit trees, without first grinding or dissolving them, which is not always practicable; and urine is usually absorbed, or should be, in the mass of manure and litter. Poultry droppings are increased in value, by the fact that the solid and liquid excrements are voided together in a solid or semi-solid mass.

The coarser straws of wheat, rye, barley, etc., are mainly woody carbonaceous substances, yet they contain some nitrogen, and they serve admirably to absorb the fluids from the animal droppings; and when mingled in a partially rotted state with the soil, they furnish additional carbonic acid directly to the roots of plants,

while by their decay they leave heavy soils open and porous, which is of decided advantage to growing crops. Nearly the same remarks apply to leaves, and muck or swamp mud. These substances contain an appreciable amount of nitrogen, and being usually abundant and cheaply obtained, their free use is profitable both for their nitrogen, and as ameliorators or looseners of the soil, thus improving its mechanical condition.

Probably the cheapest way of manuring, is the plowing in of green crops, especially clover. Clover plants gather from the air a large amount of nitrogen, and when plowed under, this is added to the soil. Our almost invariable prescription for a poor soil would be: manure it enough to bear a crop of clover, and then plow this in, and sow to wheat or rye, or plant to corn. If so poor that it will not produce clover, even with manure, then plow under something that it will bear, such as rye, buckwheat, or other crop. Keep plowing in such crops until you can get a growth of clover; then turn this under, and the soil will bear almost any crop you desire. Whether it be clover, or any other crop, let it grow until near the full flowering season, and then turn under as large a mass as possible. It does not pay to pasture down the crop, until little else than roots and stubble are left, but get the largest, fullest growth possible, and let it all go under the surface, as so much capital invested for future returns. We speak of poor land especially. On a moderately good loam, we have pastured down once in the Spring, and when a second fair growth was obtained, say towards the end of June, we have turned that deeply under, harrowed the surface in August, and then given it a thorough harrowing and cross-harrowing early in September, and sowed on the wheat, without a second plowing to distribute the sods. The results have been good, but usually on poor soils it has paid best to keep cattle off entirely, and turn under the whole growth about the time the clover came into full bloom.*

Shall coarse manures be applied whole, or be first composted?—This is a question frequently asked, and one much discussed by cultivators. By *composting* is meant the heaping together and fermentation of the manures, until they are partially or thoroughly rotted. Owing to the loss of a part of the matter during fermentation, as manures are usually composted, (that is, left carelessly in heaps about the yard, exposed to sun, and washing away by rains,) we were formerly much in favor of applying them without composting, except in special cases; but the more we have studied the subject, and gathered the results of experiments, the more strongly are we impressed with the value of a thorough composting, where it is properly done. When to be applied to a heavy and compact soil, which is of comparatively good quality, it is well to use uncomposted coarse manure, to render it less compact; but for general use, the more thoroughly the manures are rotted, and made ready for thorough mingling with the soil, the better; *provided always*, that the composting be properly done.

Composting, or rotting of manures, should, so far as possible, be always done under cover. The amount of rain falling annually upon the earth, is large enough to cover the whole with water to the depth of an ordinary barrel. In other words, if a field were covered with empty barrels, the amount of rain and snow falling during a year, would suffice to fill all the barrels. Any one can

* We wish a score or more of persons, whose letters are now on our desk, would take the above as our "prescription" for the poor fields, upon the treatment of which they ask our advice. We can suggest nothing better.

judge of the effect upon a manure yard, of covering it with barrels full of water, and then pouring these all out upon the manure. A large amount of the richest portions of the manure would of course be washed away. But this, in a degree, is just what is taking place in most of the yards in the country. The manure is left where the rains wash out the best portions. In very many instances the case is still worse. The manures are not only washed by the rain falling naturally upon them, but they are also treated to the water from the eaves of the barns or stables. In perhaps five out of six cases, horse-stable manures are thrown out of a side window, and it is a matter of chance, if rain from the eaves does not fall directly upon the heap. Manures should always be thrown together in a compact heap under cover. If no better cover is at hand, a few boards thrown over, to shed off the bulk of the falling rain, will answer very well. The surface of the heap should always be kept moist, as this will prevent the escape of ammonia, which is retained by moisture, unless in excessive quantity. The recent experiments of Dr. Vælccker show pretty clearly that there is less loss by evaporation, than was formerly supposed, both when manures are fermenting in a heap, and when they are spread upon the surface of the soil uncovered.

It is always better, however, to keep a manure heap covered with a bed of soil, or, what is still better, with muck or sods. These absorb all the escaping gases, and are themselves enriched. It is profitable to mingle with all manures just as much muck, or leaves, or sods, or surface soil, as can be added without stopping fermentation. Horse manure will bear a large addition. Cow and hog manure ferment less easily, and therefore bear a less proportion of unfermentable material added.

No lime or ashes, or other alkali, should ever be added to the manure heap. These produce too rapid decomposition, and set at liberty the most valuable portion, the ammonia, and it is lost. There may be an exception, as when the manures are desired for immediate use, in which case lime or ashes may be added, provided, plenty of moist muck or soil, containing no lime or ashes, is placed upon and around the heap to absorb escaping gases. Where muck is to be used with manure, it is well to mix it with ashes or lime by itself, and let it lie for a time before adding it to the manure heap.

Look out for a short Hay Crop.

The extraordinary dry weather for a month past has not been favorable to a heavy growth of grass, and the prospect is not now very good for an abundant supply of hay. The prudent farmer will save all the mowing ground he can, by providing other feed for his stock. Nothing is better for stock, than a good lot of corn, sown thickly in drills, to be cut up and fed green. Aside from saving the meadow, there is great economy in having a mass of green, succulent food for all kinds of stock during the season of dry, short pasturage in the later Summer. It is well to set apart a field, and sow corn, or millet, on separate portions of it, at successive intervals of 8 to 12 days. This will keep up a continuous supply of green food. If there is an excess, all the better, for what remains when good Fall pasturage comes on, may be cut and dried for Winter. Indeed, there should be a quantity grown for this very purpose, which will aid in making up any deficiency of hay.

Try the Hay Caps.

The first man that ventured to wear an umbrella, was hooted through the streets of London, and those who introduced the use of hay caps, encountered almost as much ridicule. But they have continued to win their way each season; those who have tried them, assure us of their great benefit. The damage prevented during a single storm has in many instances more than repaid the first cost. Now is the time to provide them, before the hurry of haying and harvest, leaves no leisure for any business away from the farm.

Plant Corn in June.

The weather has been so dry and favorable for field work, that most persons had ample time to put in all desirable crops. The indications are that the season will be more favorable for corn, than for grass and oats, which can not bear the heat and drouth so well. It may therefore not come amiss, to get in an extra acre or two of corn, and this can be done well in the first week of June. We have seen many a good crop of this grain planted as late as June 6th to 10th. When the seed is put into a warm soil, it starts quickly and grows rapidly, and not unfrequently overtakes that planted a month earlier. The prospect ahead now appears favorable for "good times" again. Let every one help on the country, and himself, by planting "one acre" more this month.

LONG WHITE FRENCH TURNIP.—This turnip we esteem more highly than any other for table use all through the year, or until new early turnips are produced. We have distributed among our readers more than a fourth of a ton of it, and the general verdict is in its favor, though some have not found it to grow well. It may be sown as late as the first week in August, and with a favorable Autumn, a good crop will be usually obtained. Judging, however, from our own experience, we think it best to sow the first of June for Fall and early Winter use; and in the last of June and first of July for later Winter and Spring cooking and feeding. The seed is still on our premium list, as noticed on another page.

For the American Agriculturist.

Hints on Selling Produce and Bargain Making.

The successful farmer must be a good business man. It is not enough that he can raise a hundred bushels of corn per acre; he should know when and how to sell it, and how to make sure of his money. It is observed of some men, that they always hit just the right time to sell, when prices are at the topmost notch, and that they are equally fortunate in buying, the market seeming to go down for their especial accommodation. Some may be born with a gold spoon in their mouths, but they are exceptions. Steady adherence to a few plain maxims has done more to secure competence to the fortunate, than all the "lucky stars" that ever shone. The following suggestions indicate a few of these principles.

It is safe, as a rule, to sell when the market has settled to a steady price, rather than to wait with expectation of a fortunate rise. There are periods, when everything fluctuates. The operations of speculators or other disturbing influences, cause a feverish anxiety among dealers, and prices change rapidly; but when the flurry is over, prices find the level which the relations of

supply and demand invariably fix. The man that waits for some such disturbing cause to raise the tide, that it may flood his pocket with a high price, will be quite as likely to wait a little too long, for the ebb of such currents is always rapid, and the reaction almost invariably brings a period of corresponding depression. After the bulk of the crops in the country is secured, and sufficient time has elapsed for dealers to learn the amount of supplies on hand, prices are usually steady, with a fair demand; then it is safe to dispose of produce. An average of prices obtained for ten years under this system, will exceed what is received by those who wait for the highest rates.

In his anxiety for returns above the market, the farmer is often tempted to sell on credit to unreliable parties. If prices go up, he receives his pay, if they fall, the speculator "breaks," and the producer loses. The loss of a single crop in this way has crippled many a man for years. If credit must be given, know your man, but sell for cash, if it be possible. The producer having waited months for his crop to yield, can ill afford to wait months longer for them to be turned into money.

In making a bargain, nothing is gained by higgling, or setting a price above what is really expected, and then falling by degrees to the required sum. Let the seller inform himself of the real value of his commodity, fix his figure, announce it at once, and not deviate from it. Buyers soon learn their man. They meet the chafferer with his own tactics, and usually with the advantage that it is less necessary for them to purchase, than for him to sell. If they can beat him down a notch below the market, the bargain is made, otherwise they will at least wait until another time. But a man of one price—if he is reasonable in his expectations, saves his time, does not lose his self-respect by the reflection, that he has overreached or been outdone by another—is applied to by those who are ready to purchase, and in the long run is better paid than he who "uses many words in buying and selling." The higgler is approached with caution, you feel that you must look out for him, you are not safe in believing his statements, for his practice tends to dishonesty; you may go with all confidence to the fair dealer, knowing that his terms do not vary, and you can buy of him as favorably as the shrewdest speculator.

In all contracts, a full and plain statement of terms in writing, is the best preventive of misunderstanding. The form is of less consequence than such a record of details as leaves the meaning clear and explicit. Ten drops of ink, rightly put on paper, may be worth many times ten dollars in ill feeling, or lawsuits and costs.

There is a class of farmers who rely more on their powers of bargain making, than upon the productiveness of their soil. When others are plowing and planting, they are buying and selling oxen. They will leave the cornfield unfinished for a chance to trade horses, and a vendue will attract them from every other occupation. One of this class is usually known by the remarkable assortment of wagons, carts, and miscellaneous implements scattered about his premises, generally by the roadside; by the backwardness of his fields, the dilapidation of his fences, his breachy cattle, marauding hogs, balky horses, and complaints of hard times. Always ready for a "trade," his neighbors find him of service in relieving them of undesirable stock, and his place becomes a kind of eddy, into which the rubbish of the town is swept. But as such persons seldom read the *Agriculturist*, advice here would be wasted; they are mentioned only as we would set up a finger post with the inscription: "A

hard road to travel," which is a sufficient caution to the wise to avoid it. HOMESPUN.

Berkshire Co., Mass.

Advertising Information—Gratis...X.

We ought to be rich—we've had the assurance of it many times. Advertisements glittering with golden promises, have beguiled many a dollar from our hard earned gains. Have we not invested in recipes, books, powders, pills, inventions, gift enterprises, and western lands? Where is the pile we were to make by the "Hunter's Secret," "The secret art of catching Fish," "The Honey Recipe," the tea plants, and Dourah Corn? We know where it *isn't*. Although we have said little on the subject for some time past, we have not been idle, but have continued to follow up every avenue opened by the kind-hearted advertisers, hoping to find some way to wealth, by which not only we, but all our readers, could with one grand stroke, or at least, by a good many little strokes, make money—with what further success shall now appear.

[No. 33.]

WANTED. THE "LITTLE MONEY-MAKER." The most saleable article in the known world. Agents wanted everywhere. For particulars, directions, and sample, enclose four red stamps to —.

That looked a little suspicious. The *Little money maker*. Well, "little and often" fills the bucket; perhaps it's all the more certain for coming by *littles*—at any rate, the stamps were sent; and here's what came of it. Messrs. — & Co. return us a sample of their self-sealing newspaper envelope, worth perhaps a third of a cent, which they offer to sell us for \$1 per hundred, and we are to make our "little money" by retailing them at two cents each. They seem to be ashamed of the little operation, by which they make at least one red stamp, for they say in their letter:

"We have been forced to adopt a system of advertising, which may seem at first glance to be an imposition, that is, requiring four stamps for a sample, but we return their equivalent on first order. We have done it for the reason that we are daily in receipt of letters from parties who write us merely out of curiosity, and with no intention of engaging in the business, and to whom we are obliged to send circulars, pay postage, and in many cases write letters to no purpose whatever, and we deem it no more than simple justice that they should pay us for time spent in such a manner."

To which we reply. Messrs. —, had you advertised plainly what you had to sell, our curiosity would not have been excited, we should have saved twelve cents. However, it may be worth that amount for our readers, to know how *little money* can be made, by noticing any advertisement of this class. It appears by the extract quoted above, that other parties are paying Messrs. — for exciting their curiosity, and spending time in gratifying it.

[No. 34.]

MEND YOUR OWN TIN WARE. A new and novel process, so simple that any person can mend all their old leaky tin ware, kettles, etc. Implements and materials, with full printed directions, sent to any address on receipt of 25 cents, by —.

The above appeared in the *Country Gentleman* a few weeks since. To be sure, not a great deal of money was promised, but then, a penny saved is a penny gained, and stopping leaks is one of the very first principles of economy. A soldering tool alone would cost fifty cents, to a dollar or more, and this man offers everything necessary for a "quarter," and we concluded to invest.

A letter soon returned, enclosing the necessary "implements, materials and directions," to wit: a small piece of brass wire, flattened at one end, a small strip of sheet lead, and about 1/4 oz. of saltpeter, we judge, by the appearance. They cost probably one cent, all told, and are worth for sol-

dering purposes exactly nothing. Accompanying the above was another letter from the same party, offering to sell us for thirty-seven cents a recipe for making hard and soft soap. Thank you for nothing at all, Mr. —, you sold us once for 25 cents, and we feel too cheap, to have the price raised so soon.

[No. 35.]

DEAR SIR: If you will give the following three months insertion in your paper, among the general advertisements, where it may be seen to advantage, we will, on receipt of a copy, send to you by return mail the Engraving and also a Gift. Also after you receive the Engraving, please call the attention of your readers to the advertisement. Yours, truly, —.

MAGNIFICENT ENGRAVING OF CHRISTOPHER COLUMBUS and his Crew. This Beautiful Engraving was designed by Rubens, one of the most celebrated artists that ever lived; the cost of the original design and plate being over \$8000, size 22 by 29 inches.

SCHEDULE OF GIFTS
To be given to the purchasers. For full particulars send for a Bill.
1 Cash. \$5000 | 1 Cash. \$1000 | 5 Cash. \$300 | 10 Cash. \$100
1 Cash. 3000 | 1 Cash. 500 | 10 Cash. 300 | 10 Cash. 50
1 Cash. 2000 | 1 Cash. 500 | 10 Cash. 250 | 100 Cash. 5000
1 Cash. 1500 | 4 Cash. 300 | 10 Cash. 200 | 2000 Cash. 5000
Together with a great variety of other valuable gifts, varying in value from 50c. to \$25.
Any person enclosing in a letter \$1 and five 3-cent postage stamps (to pay for postage and roller) shall receive, by return of mail, the magnificent engraving of Christopher Columbus, (and one of these valuable gifts as per bill.) Address all orders for bills or engravings to —.

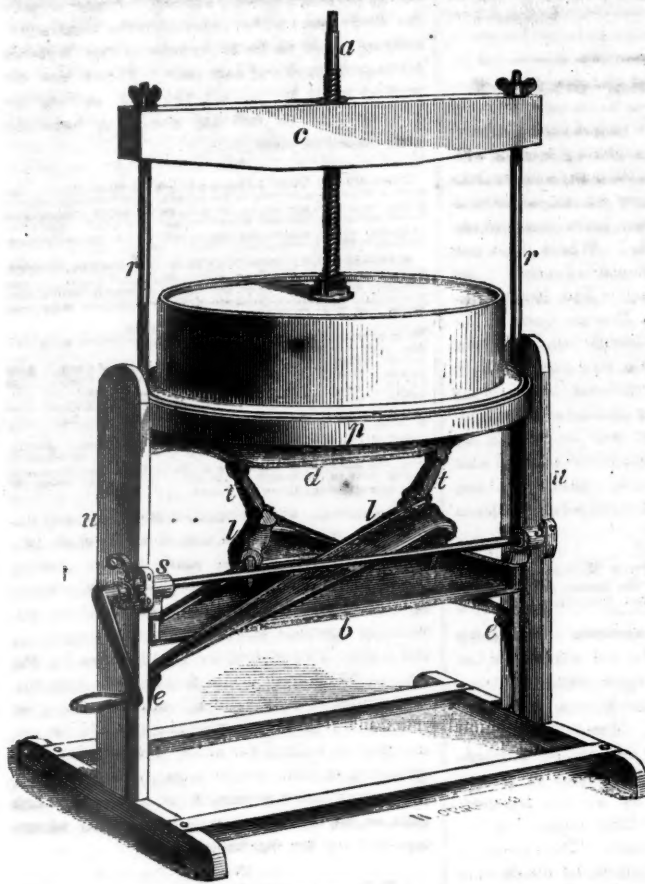
This comes to us directly from the party engaged in the enterprise, and we very cheerfully give it an insertion. As space in the reading columns is worth more than three times as much as "among the general advertisements," we expect one insertion will secure us the engraving and a gift. Please send us the first one on the list, the \$5000 cash. You do not state how the "gifts" are to be distributed, and we take it for granted, we can have our choice... On second thought, we believe the above is a kind of lottery operation, in other words a gambling enterprise, or to speak more plainly, it is a trap to catch gulls, so, we don't expect the \$5000—the advertisement you are welcome to.

[No. 36.]

"Dr" — advertised for agents to make money fast. A reader in Tennessee inquired as to particulars, and received a circular describing a wonderful book, price one dollar, which would give information on every subject mortals would like to know about, particularly those topics about which nothing can be known, such as the "secret power of charms, spells, incantations," and other nonsense; how to bring a dead tree to life; how to keep cattle from growing old; how to change the color of the eyes, and hundreds of other absurdities. Our correspondent, thinking such a book would sell, sent his dollar for a specimen copy—and that's the end of that story. The man was sold, the book was not.

Numerous medical circulars have been received, many of them sent out from this City to distant points South and West, and returned by our subscribers for investigation. It would take all our time, space, and more patience than falls to the lot of any one man, to follow up these fellows individually—it is not necessary. If an animal with sharp nose, yellow fur, and bushy tail, comes prowling around the hen roost, he is shot at once, without inquiring if he be the particular animal that has destroyed the poultry, it is enough that he is a fox. So when a medical circular is received, promising certain relief from all diseases whatsoever, or inviting you to send one or more dollars to an unknown party for medical advice, or for a wonderful herb, root, or other specific, call it a *humbug*, and save your dollar and your disappointment. There is one class of these medical circulars, of too delicate a nature fully to discuss here, that ought to consign their authors to prison. Throw them in the fire as soon as they are received. Their statements are false, their purport wicked, their tendency ruinous. Let not their evil communications corrupt good manners.

(To be continued as needed.)



A new Cheese Press.

We present above an illustration of a press invented by E. Davis, of Vermont, we believe, presenting a novel application of power, which, upon examination, appears effective, though we have not seen it tested by actual operation in the dairy, where only its merits for that purpose can be fully decided. The principle feature to be noticed is the use of the toggle joints shown at *t, t, l, l*, by which the weight of the cheese or other article, and of the press itself, supplies the power. The platform, *p*, to receive the cheese, is fastened upon an iron cross bar, *d*, which slides up and down the rods, *r, r*, passing through eyes at its ends. Two projections on the under side of *d*, rest in grooves on the end of the short pieces, *t, t*, which move freely on these joints, and on similar joints on the levers, *l, l*, below. The levers, *l, l*, rest on similar loose joints at the points, *e, e*, and on projections upon the upper edge of the iron cross beam, *b*. The cross bar, *b*, is sustained by screws and nuts on the lower ends of the upright rods, *r, r*, which pass up through the wooden cross bar, *c*. By examining the illustration attentively, it will be seen that the whole weight of the working part of the apparatus and the cheese rests upon the points, *e, e*. If the narrow ends of the levers, *l, l*, where they rest upon the points, *e, e*, were lifted up, the levers would act upon the short pieces, *t, t*, and tend to push them out to a perpendicular position. This would raise the platform and the cheese upon it, and cause it to press against the bottom of the long screw, *a*. And the more nearly the levers, *l, l*, are brought to a horizontal position, the more nearly *t, t*, will be brought to a perpendicular, and the greater will be the pressure. Instead of raising the points, *e, e*, the weight of the cheese, platform, etc., causes the thick ends, or short arms of the levers, *l, l*, to descend, thus tending to bring the levers to

a horizontal position, and making them act upon *t, t*, and exert a pressure, the same as if the other ends of *l, l*, were raised, as before described. The horizontal rod fitted with a crank and ratchet wheel, has two straps, *s, s*, which wind upon it. The lower ends of the straps are fastened to the ends of the cross beam, *b*. By turning the crank, the working parts are elevated to a proper position to receive the cheese, where they may be held by the ratchet and catch. The crank is readily detached from the horizontal rod, and used to raise or lower the long screw, *a*, which communicates pressure to the "follower," and the cheese under it.

In pressing cheese, particularly, it is desirable that the pressure should be light at first, and increase gradually to the end of the process. To accomplish this, the straps are wound up as described above, and the catch thrown into the ratchet wheel; this supports the weight of the platform and other parts, and prevents the action of the levers, *l, l*. Then, the screw, *a*, is turned down upon the follower as tightly as may be desired. When greater pressure is wanted, the catch is lifted from the ratchet wheel, leaving the weight of cheese, etc., to act on the levers, *l, l*, as before described, the power continuing to increase as the cheese yields to the pressure and descends. If more power is needed, it can easily be had by adding weights to the platform, though for all ordinary purposes, the weight of the cheese and apparatus would appear sufficient. If an actual trial of the apparatus prove it as effective as an examination indicates, it will be found valuable. The principle is applicable to other uses where pressure is wanted only in a limited space, the range being confined to a few inches. The parts are not objectionably complicated, and the price, \$10, not beyond the means of dairymen generally.

The Wild Turkey.

The turkey is the most recent of our reclaimed birds. That we can not fix the precise time nor learn any of the circumstances which relate to the introduction of the turkey into Europe, may cause some astonishment, when we reflect that it must have occurred at some period after the conquest of America.

Oviedo, who resided as Governor of the port and harbor of St. Domingo, in the Island of Hayti, in 1514, published a work entitled "*Tratado de la Historia Natural de las Indias*," which was published at Toledo, in 1526. In this work he describes the turkey as a kind of peacock abounding in New Spain, (America) whence numbers had been transported to the islands and the Spanish Main, and were domesticated in the houses of the Christian inhabitants. They were also

called the "India Cock and Hen," as they were first taken from the West Indies to Europe.

They were first introduced from Spain into England as early as 1525, and were in a short time spread over the whole kingdom, and increased to that degree that in 1555 they could already furnish a dish in country feasts. They have since been domesticated throughout the civilized world.

The turkey is strictly a native of North America, having its range from the Isthmus of Darien on the south to the 15th parallel of north latitude, and east and west, from the Atlantic Ocean to the Rocky Mountains. No individual of the species has been seen south of Panama, and it is unknown beyond Lake Superior.

Formerly they were abundant in the unsettled parts of the States of Michigan, Ohio, Kentucky, Illinois and Indiana, and an immense extent of country to the north-west of these districts upon the Mississippi and Missouri, and the vast regions drained by these rivers, from their confluence to Louisiana, including the wooded parts of Texas, Arkansas, Tennessee and Alabama, but none have been observed either on the Rocky Mountains or to the westward of them. They are, however, becoming less numerous in every portion of the United States, even in those parts where they were very abundant forty or fifty years ago. Like the Indian and the Buffalo, they are fast fading away before the march of civilization.

"The great size and beauty," says Audubon, "of the Wild turkey, its value as a delicate and highly prized article of food, and the circumstance of its being the origin of the domestic race now generally dispersed on both continents, render it one of the most interesting of the birds indigenous to the United States of America."

The plumage of the wild turkey, is compact, glossy, with metallic reflections; feathers double, as in gallinaceous birds, generally oblong or truncated; tips of the feathers almost conceal the



bronze color. The large quill coverts are of the same color as the back, but more bronzed, with purple reflections. The lower part of the back and tail feathers are of the same color, undulatingly barred and minutely sprinkled with black, and having a broad blackish bar toward the tip, which is pale brown, minutely mottled; the under parts duller; breast of the same color as the back, the terminating black band not so broad, sides dark colored; abdomen and thighs burnish grey; under tail coverts blackish, glossed with brown, and at the tips bright reddish brown. The plumage of the female is less brilliant than that of the male."

It has been said by some authors, "that in a state of domestication the wild turkeys, though kept separate from tame individuals, lose the brilliancy of their plumage in the third generation;" but such is not the case with mine, which are the fourth generation from the wild bird.

The wild turkey does not attain its adult form

until its third year, although it certainly continues to increase in size and beauty for several years. Females have their full size and coloring at the end of four years. The weight of turkey hens averages about nine pounds when nine months old; and the males differ more in their bulk and weight. At nine months old I have had them to weigh from sixteen to nineteen pounds. The cock turkey, from which I am breeding, turned the scales at 24½ pounds, at one year and ten months old.

Springdale.

C. N. BEMENT.

The Cattle Disease in Massachusetts.

The prompt measures taken by the Legislature of Massachusetts, relative to the dangerous cattle disease, noted in our last, were not a whit too speedy or decisive. But a short time would have been sufficient to disseminate it beyond control: the examinations already made, show its progress to have been even greater than was suspected. It will be well for the country if the thorough means used, shall prevent the further spread of what has proved a scourge of the cattle herds of Europe. The commissioners appointed by the Legislature have examined the cattle in the towns of Belmont, North Brookfield, and New Braintree, and found that the infection had been taken by nearly or quite every animal exposed to it. Even where the creature appeared healthy externally, dissection showed the lungs diseased. In one or two cases there appeared a possibility of recovery, but usually it was plain that death must soon have resulted. One hundred and eight cattle had been slaughtered up to the date of May 3d, and more than two hundred more have been condemned. The appropriation (\$10,000) made to remunerate the owners, having already been exceeded, the Massachusetts Society for promoting Agriculture subscribed \$2,000 towards a guaranty fund to meet additional cost, and several public spirited gentlemen have contributed liberally to the same purpose, sufficient it is thought to meet the required outlay. It is reasonably expected that the Legislature will make up this sum at its next session; at one time it was proposed to call an extra session for the especial purpose. It is stated that the disease is now confined to the town of North Brookfield, and that by destroying the remaining infected herds, and using proper precautionary measures, it will be eradicated.

For the American Agriculturist.

Grooming a Horse.

"What do you give your horses to keep them in such fine condition?" asked a young farmer of his neighbor, whose team of bays was the pride of their owner, and the admiration of the village. "Oats, carrots, and plenty of brush," was the reply. There is little need of insisting on the necessity of good food, and plenty of it, to have a horse remain vigorous. Every one knows that bone, and sinew, and muscle are manufactured from hay, oats, corn, etc., and that the raw material must be supplied to produce the strong limb, elastic step, and noble spirit, which make a fine horse the universal favorite he is. But the important part which the skin bears in the animal economy, and the necessity of properly cleansing and keeping it in healthy condition, are not fully appreciated. Rough staring coats, "grease" or "scratches," inflammations, and a whole catalogue of diseases find their origin in neglect of proper grooming.

The skin of the horse, like that of other ani-

mals, not only affords protection to the parts within, but by the pores affords an outlet to a large part of the waste of the body. In out-door life, the natural state of the horse, this membrane becomes thickened and tough, capable of resisting changes of temperature; and by continual exercise, the pores are kept open, giving free exit to all the exhalations. But this alone will not give the smooth glossy coat which adds so greatly to the animal's beauty. Confining the horse to the stable, as is generally done for at least part of the year, renders his skin tender, especially when he is kept warmly blanketed. Expose him now to great change of temperature; take him out and drive him until heated, return him to the stable, and let him stand uncared for over night, even for an hour, the sensitive skin is rapidly chilled by the evaporation of the sweat, the pores are suddenly closed, and often a cold, a rheumatic stiffness or other disorder results. Proper grooming prevents this, by toughening the skin, keeping it in healthy action, equalizing the circulation, removing obstruction from the pores, and what is of great importance, by rousing the action of the muscles at the surface, in some measure, compensates for the want of exercise consequent upon stable life.

Currying and brushing should not be done in the stable; the dust and scurf will be scattered in the manger to mix with the horse feed, besides keeping the stable uncleanly. Take the animal into the open air, tie him securely, and handle him so gently that he will enjoy, rather than dread, the application of the comb and brush. A sharp currycomb, roughly scraped over the tender skin, is anything but pleasant, as the shrinking and resisting animal will soon show. Apply this instrument lightly, and depend mainly upon the free use of the brush. Begin at the head, and pass the comb lightly up and down, until the dandruff is all loosened, and remove it with the brush. Be particular around the edges of the fore-top, and the mane. It is a good plan to sponge off the head and ears, using but little water, smoothing the hair down to its natural position. In going over the back, quarters, loins, etc., use the comb in one hand and the brush in the other, working lightly and quickly. Take much pains where the skin lies in folds, as at the union of the legs with the body—let every part be made thoroughly free from dust and dandruff. Finish by rubbing down vigorously with wisps of straw, until the hair "shines like a bottle"—an extra smoothing touch may be put on with a woolen cloth. Do not fear all this trouble; it will be more than repaid in the extra looks and spirit of the horse.

E. H.

Sheep Husbandry....I.

One of the most delightful and profitable branches of husbandry is the care of sheep. Owing to the mixed husbandry which the circumstances of the country force upon most of our farmers, it is rarely made a specialty. With the exception of Texas, and some other parts of the Southwest, where pasture lands are very cheap, it occupies a subordinate place. In many of the older States, the flocks of sheep have been on the decline for the last thirty years, and many farmers do not keep them at all. In the age of homespun, sheep were a necessity, and had a place upon almost every farm. Farmers and their families for the larger part of the year, were clad in cloth made from their wool, manufactured at home. It was a very important part of domestic industry, and the females of the household spent several months each season in carding, spinning,

and weaving the wool of the flocks. With the introduction of woollen manufactories, and the cheapening of woollen fabrics, all this has passed away, and the spinning wheels and looms, whose music enlivened all the Winter months, have been banished as useless lumber to the garret. We have been in a sort of transition state for the last thirty years, from the age of homespun to the age of manufactures. The want of adequate protection on woollen fabrics, has rather discouraged our own manufacturers, and led to large importations. Farmers having no longer a use for their wool at home, and no large demand for it at the factory, have diminished their flocks and put their capital into other branches of husbandry.

Latterly, however, a new interest has been awakened in sheep, and there are clear indications of a revival of wool-growing in the older States. Our manufactures are beginning to compete with the imported articles, and there is a larger demand for our fleeces. As the cities and villages increase in population, there is an increased demand also for mutton, and many make this a leading object in their selection of stock. The South Downs and their crosses are kept exclusively in some sections, and the butcher comes for fat lambs and wethers to the farmer's door, almost every month in the year. On farms well adapted to sheep grazing, and in the vicinity of good markets, they are found to be highly profitable. The increased interest taken in sheep, calls for a new discussion of this department of husbandry.

SHEEP WASHING.

Beginning with the business which is appropriate to the season, we offer a few hints upon this topic. The object of the washing is to remove the filth which accumulates in the fleece during the Winter and Spring, and the gummy material or yolk which exudes from the skin, and is retained in the wool. The cleansed fleece properly folded, presents a more inviting appearance to the purchaser, and commands a better price for being in good condition.

In this latitude and further north, the water is not usually warm enough for washing until the month of June. A certain degree of warmth is not only demanded for the comfort of the washer, who stands in the water, but for the proper cleansing of the wool. The yolk dissolves much more readily in warm water. The best time for washing is just after a copious rain, to which the sheep have been exposed. The more common method is to select a clear swift running stream, three or four feet in depth, so that the sheep can not touch bottom and hinder the washer. If there is fall enough in the stream, it will expedite the washing to have two dams, the lower one furnishing a standing place for the washers, and the upper one furnishing a stream of water, and running from a trough with a fall of two or three feet. If the sheep be held directly under this jet of water, it will cleanse the wool very rapidly.

Prepare a pen at the edge of the stream, so that escape shall be impossible, and so large that it will accommodate all the flocks without giving them much room to run around when they are wanted for washing. It is a matter of a good deal of importance, that they should not be heated when they go into the water. Let them be driven slowly to the stream, and kept as quiet as possible in the pen. Many of the colds which sheep contract at this season, are owing to the neglect of this precaution. In handling the sheep to the washers, catch them by the head and neck, never by the wool on the back. If the sheep are not too heavy, they can be lifted in the arms; if very

large, take them by the fore legs, in passing them into the water.

The washer should take the neck of the sheep upon the inside of the elbow, keeping the nose out of the water while he presses the wool vigorously with both hands. The washing is to be continued until the water flows away clear from all parts of the fleece. When clean, they should be carefully conducted to a place of easy ascent, and the owner of the flock should receive them at the edge of the stream, and see if the washing has been thoroughly done. They should be made to stand still after they get out, until the most of the water drains from the fleece. Care should be taken not to drive them along dusty roads. To avoid this, it is a great advantage if the washing can be done at some stream on the farm, or near the sheep pasture. If this can not be done, a day after a rain should be selected, when the dust is laid. After washing, they should be kept in the freshest pasture, free from dirt and briars, until shearing.

Though there is not much danger of taking cold in standing in the water at this business, for two or three hours at this season, still some prefer to keep the person dry. This may be done by sinking a hoghead with one head out, in the stream where the washing is to be done. The vessel is confined in its place by heavy stones upon the inside, and the sheep is brought along the outside, while the washer stands within, and wets only his hands and arms.

Others accomplish the same thing, by making a dam, and running a flume out from the top ten or twelve feet long, and about two feet square. The top of the flume should be just high enough for the convenience of the washer. The sheep, in this method, are best managed by two individuals, one standing upon each side of the flume. With a good head of water, the cleansing may be very rapidly and thoroughly done in this way. In a week or two after the washing, depending somewhat upon the weather, the yolk, which is a kind of natural soap, will again be diffused through the wool, and give it that desirable softness which indicates the proper time of

SHEARING.

The clipping of the wool, though a simple process, is an art in which one can attain skill only by practice. In most neighborhoods where sheep are kept, there are persons who make a business of shearing while the season lasts, and it is generally good economy to secure them at advanced wages. Green hands are apt to cut the wool uneven, and to hack the skin of the animal badly. It is desirable that fair weather should be selected for this work, as the sheep ought to be dry and clean; a condition quite impossible in rains. Scrupulous attention to cleanliness will materially affect the market price of the wool. If the barn floor be selected for the shearing, as is usual, start the dirt out of the cracks in the floor, with a few blows of the flail, and sweep out clean. Sweep up after every fleece is taken off.

After the sheep are yarded, put a few at a time into a clean pen or stable, adjoining the barn floor or place of shearing. If several shearers are employed, a man should be on hand to catch the sheep for them, to cut off long toes and troublesome horns, and to mark them when they are shorn. In shearing, begin with the head and neck, then the legs and belly, leaving the sides and back to the last. The main thing is to shear evenly, closeness being a minor consideration; as what is left, adds so much to the length of the next fleece. Great care should also be taken to avoid clipping the wool a second time, and the cutting of the skin. Shearing brings to light the man-

agement of the sheep for the past winter. If this has been good, the undressed animals will look sleek and round without the fleece. If otherwise, the projecting ribs and hip bones will stare the husbandman in the face. The appearance of some of these neglected flocks when shorn, especially if they have had unskillful shearing, is a most ghastly spectacle. The work of starvation begun by the farmer, is not unfrequently finished by the crows.

The folding of the fleece is a matter of considerable importance to seller and purchaser. It should be kept as unbroken as possible while shearing, and if the matter have not been previously attended to, all dirty and clotted bits of wool should be removed. Provide a table of the length of the longest fleeces, and three or four feet wide. A door put upon two barrels will answer, if the door is smooth. Spread the fleece upon the platform, sheared side downward, and crowd the wool together as closely as possible. Put all the scattering locks of clean wool at the ends, then fold over the sides so that the package when done up, will be from one to two feet long, according to the size of the fleece. Then fold over the fleece so as to make a package as nearly square as possible, leaving the wool upon the back, on the outside. The objection to rolling is, that it opens the staple too much. Tie with a stout line, twine passed around the bundles once or twice in opposite directions. The wool, if it be not sent immediately to market, should be stored in some tight building or loft, where it can be kept free from dust and moths. It loses nothing in weight by keeping a few months. The yolk will preserve it from insects.

Though wool can be kept over, if prices do not suit, it is generally the best course to sell as soon as prices are settled. The loss of interest upon the money is considerable, and the prospect of higher prices the second season, can never be made certain. Though some farmers shear without washing, it is a filthy practice, and too expensive for good flock masters to indulge in. The purchaser will insist upon making his own estimate for the deduction on account of dirt. Clean wool will bring the most clean money, and the farmer should seek to establish his reputation for a good article put up in the best condition. Eschew all tricks, and let the inside correspond with the outside of the fleece.

What Shall be Done with the Dogs?... II.

MASSACHUSETTS DOG LAWS.

It is a cheering fact that the Legislatures of several different States have answered this question satisfactorily during their recent sessions. It is a matter of general congratulation that efficient means were adopted by the Massachusetts authorities to limit the ravages of the cattle disease as noticed in another article, but the dog nuisance is almost as crying an evil as "pleuropneumonia," would have become. Since our recent agitation of the subject we have been receiving statistics and isolated facts enough to convert the greatest friend of the canine race to an uncompromising enemy. Again we say legislate the dogs out of the way of sheep raising.

We are indebted to Chas. L. Flint, Esq., Sec. of the Massachusetts Board of Agriculture, for a copy of the Dog Laws of that State now in force.

Protection of Sheep, Lambs, and other Domestic Animals, against Dogs.

Sec. 52. Every owner or keeper of a dog shall annually on or before the thirtieth day of April, cause it to be registered, numbered, described and licensed for one year from the first day of the ensuing May, in the office of the clerk of the city or town wherein he resides; and shall cause it to wear round its neck a collar distinctly marked with its owner's name and registered number,

and shall pay for such license one dollar for a male dog, and five dollars for a female dog.

Sec. 53. The clerk shall issue the license, and receive and pay the money therefor into the city or town treasury, retaining to his own use ten cents for each license. The treasurer shall keep an accurate and separate account of all sums received and paid out under the provisions of this chapter relating to dogs, which account shall at all times be open to the inspection of any voter of the place.

Sec. 54. The clerk shall annually, within one week after the first day of May, post in some conspicuous public place a list of all dogs licensed for the current year; and shall furnish a copy thereof to the chief of police of the city, or one of the constables of the town; and shall also, from time to time, furnish said officers with a list of such dogs as are subsequently licensed during the year.

Sec. 55. Any owner of a dog may at any time have it licensed until the first day of the ensuing May, upon paying the sum as provided in section fifty-two; but such license shall not exempt him from the penalty of the following section, on complaint made prior to issuing the license. No new license for the current year shall be necessary upon the removal of a licensed dog into another city or town, unless required by some by-law passed under section sixty-seven.

Sec. 56. Whoever keeps a dog contrary to the provisions of this chapter, shall forfeit ten dollars, to be recovered by complaint, to the use of the place wherein the dog is kept.

Sec. 57. Whoever wrongfully removes the collar from or steals a dog, licensed and collared as aforesaid, shall be punished by fine not exceeding fifty dollars; and whoever wrongfully kills, maims, entices, or carries away such a dog, shall be liable to its owner for its value in an action of tort. Whoever distributes or exposes any poisonous substance, with intent that the same shall be eaten by any dog, shall be punished by fine not exceeding fifty nor less than ten dollars.

Sec. 58. Any person may, and every police officer and constable shall, kill or cause to be destroyed all dogs going at large and not licensed and collared according to the provisions of this chapter; and such officers, when not otherwise paid for their services, shall receive from the city or town treasury fifty cents for each dog so destroyed by them.

Sec. 59. Every owner or keeper of a dog shall forfeit to any person injured by it, double the amount of the damage sustained by him, to be recovered in an action of tort.

Sec. 60. Any person may kill a dog that shall suddenly assault him while he is peaceably walking or riding without the enclosure of its owner or keeper; and any person may kill a dog that is found out of the enclosure or immediate care of its owner or keeper, worrying, wounding, or killing any neat cattle, sheep or lambs.

Sec. 61. If any person so assaulted, or finding a dog strolling out of the enclosure or immediate care of its owner or keeper, shall, within forty-eight hours after such assault or finding, make oath thereof before a justice of the peace or police court for the county, or before the clerk of the city or town where the owner of the dog dwells, and shall further swear that he suspects the dog to be dangerous or mischievous, and shall give notice thereof to its owner or keeper by delivering him a certificate of such oath signed by such justice or clerk, the owner or keeper shall forthwith kill or confine it; and if he neglects so to do for twenty-four hours after such notice, he shall forfeit ten dollars.

Sec. 62. If, after such notice, the dog is not killed or confined, but is again found strolling out of the enclosure or immediate care of its owner or keeper, any person may kill it.

Sec. 63. If a dog, after such notice to its owner or keeper, shall by such assault wound or cause to be wounded any person, or shall worry, wound, or kill any neat cattle, sheep or lambs, or do any other mischief, the owner or keeper shall be liable to pay to the person injured thereby treble damage, to be recovered in an action of tort.

Sec. 64. Whoever suffers loss by reason of the worrying, maiming, or killing of his sheep, lambs, or other domestic animals, by dogs, may, within thirty days after he knows of such loss, present proof thereof to the mayor or selectmen of the city or town wherein the damage is done; and thereupon said officers shall draw an order in favor of the owner upon the treasurer of said city or town for the amount of such loss. The treasurer shall register such orders at the time of their presentation, and annually on the first day of January pay them in full, if the gross amount received by his city or town under the provisions of this chapter relating to dogs, and not previously paid out, is sufficient therefor; otherwise he shall divide such amount *pro rata* among such orders, in full discharge thereof. After such order has been drawn, the city or town may, in an action of tort, recover against the keeper or owner of any dog concerned in doing the damage the full amount thereof.

Sec. 65. The owner of sheep, lambs, or other domestic animals, worried, maimed, or killed by dogs, shall have his election whether to proceed under the provisions of the preceding section or of sections sixty-one, sixty-two, and sixty-three; but having signified such election, by commencing a suit or obtaining an order, he shall not have the other remedy.

Sec. 66. The mayor and aldermen of each city, and the selectmen of each town, shall require all dogs not licensed and collared according to the foregoing provisions, to be destroyed, and shall enforce all penalties herein provided. Any officer refusing or neglecting to perform the duties herein imposed upon him, shall be punished by fine not exceeding twenty-five dollars, to be paid into the city or town treasury.

Sec. 67. The city council of any city, and the inhabitants of any town, may make such additional by-laws and regulations concerning the licensing and restraining of dogs, as they deem expedient, and may affix any penalties, not exceeding ten dollars, for any breach thereof; but such by-laws and regulations shall relate only to dogs owned or kept in such city or town; and the annual fee required for a license shall in no case be more than one dollar in addition to the sum required by section fifty-two.

Sec. 68. All fines and penalties provided in the sixteen preceding sections may be recovered on complaint before any police court or trial justice in the county where the offence is committed.

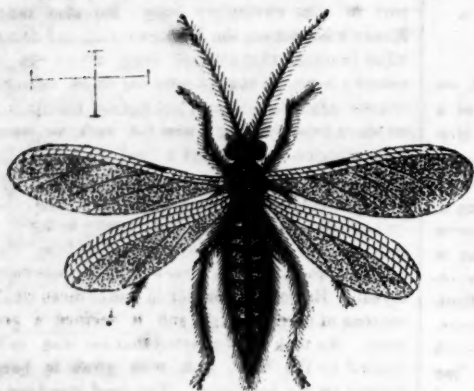


Fig. 1—Prolific Lace wing Fly, (*Hemerobius Numenia*), magnified—The cross lines on the left show the natural size.

Microscopic Views of the Insect World. IV.

BY MRS. CHARLOTTE TAYLOR.

THE PROLIFIC LACE WING FLY.—*Hemerobius Numenia*.

It is one of the greatest accomplishments in life to be able to distinguish our true friends among our acquaintances, much more is it to be able to succor and protect the beneficial and serviceable creatures with which the Divine Creator has surrounded us—I was grieved beyond measure the past season, to see a man standing, knife in hand, very industriously scraping something from the leaves of a Dahlia plant.

"What are you doing?" I asked.

"Scraping off these long-stemmed things," he answered, "they hatch the ugliest little lice, that eat the leaves, spoiling every plant I have."

"You are wrong," said I, "they are the very salvation of your plants, 'these,' pointing out hundreds of

Aphides—

"these destroy

your plants, the

others are placed

here to relieve

them of this destroyer."

"Pooh!" he replied,

"I know better; every

year I do the same thing,

and this is the reason I have a

few Dahlias left, otherwise

I should have none." I bowed

and passed on. I am fearful

there are many like him,

and if this little treatise can

stay the hand

of one such

barbarian,

what success!

jaws.

The *Hemerobius Numenia* is so called from

its eggs being found newly deposited on the

Apple tree, Dahlia, honey suckle, and various other

plants, from June to October, and far into November

if the season be mild. The *Hemerobii* belong

to the second family of the Neuroptera.

The perfect insect or Imago, has splendidly metallic

colored eyes, globose and very prominent,

which have obtained for all this family the name

of the "Golden Eyed Fly." The body is long,

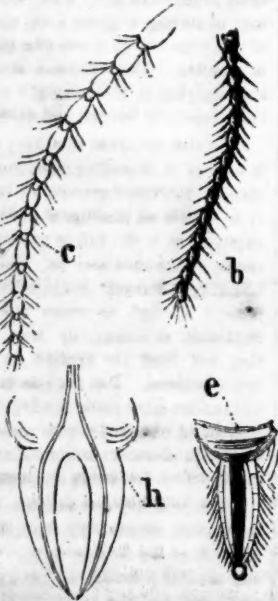


Fig. 2—*a*. The Antennae, always 13 jointed—*b*. Antennae of the second fly—*c*. The Ovipositor (egg-tube) concealed within—*d*. The Mandibles or jaws.

The *Hemerobius Numenia* is so called from its eggs being found newly deposited on the Apple tree, Dahlia, honey suckle, and various other plants, from June to October, and far into November if the season be mild. The *Hemerobii* belong to the second family of the Neuroptera. The perfect insect or Imago, has splendidly metallic colored eyes, globose and very prominent, which have obtained for all this family the name of the "Golden Eyed Fly." The body is long,

antennae moniliform, (resembling a necklace), the wings nearly equal in size, not folded, bent down, beautifully divided into meshes finer and more transparent than any lace, which gives them another name, the "Lace wing fly." The tarsi or feet, have five joints, the mandibles are masticatory or fitted for cutting food. They have a peculiar smell, to many persons very disagreeable, which I think can be traced to the decomposition of vegetable juices required by the female to manufacture the glutinous liquid she needs when depositing her eggs. The males of this family have little or no scent, and what they have, seems to be obtained from their companions. The one before you, Fig. 1, is very much distended with eggs; she had deposited a great number before she was caught—they are generally very slender.

This is not a pretty specimen, her eyes are very brilliant, however. She is hairy, in some lights has a dull yellowish color, then again she is all black. She has no spots on her wings, except one at the stigma; (a small dark spot seen on the upper side of the wing, fig. 1); the costal nerve—(the horny rib running along the upper side of the wing,) is peculiarly strong; the veins are all a very dark green, almost black. In a good light you may perceive a dark line descending in a point on the thorax.

Six years ago, this fly was abundant on apple trees and other plants in Massachusetts. I never met with it again until June of last year. On the same plant from which this was taken, a leaf was obtained, on which were two cocoons, from one of which partly emerged another genus—its wings were never unfolded, it died in extricating itself. I give the antenna, *c*, Fig. 2, on account of its singularity.

The manner in which she deposits her eggs, has puzzled authors for a long time, but the process is simple when you can observe the insect. She touches the under part of the leaf with the points of her abdomen; the glue, which is very much thicker than that of other insects, is dropped on it from two tubes on each side of the oviduct (egg tube); she then elevates her body until it forms an angle with her head. The thread by which the egg is attached to the leaf, Fig. 3, I have always noticed is the length of the fly's abdomen; some being very short, others very long, consequently you can tell by the length of the thread or foot stalk on which the egg is placed, whether the fly will be a large or small specimen—I merely give this as my experience, I have never known it to fail. If you look at these stalks, *f*, fig. 3, you will see that from the globule of glue, two threads spring out, which unite into one, and when her abdomen has attained all the elevation she is able to give it, an egg descends from the oviduct and is placed thereon, so firmly attached, no storm of wind or rain can disturb it. You ask the question why is this done? She understands this beautiful provision of nature.—She knows her own children or larvae are greedy, carnivorous creatures, devouring every thing in the shape of egg or larvae, and would suck up their brothers with the same *sang froid* they would their own natural food, the Aphides, thus you per-

ceive, placed on these high stalks, they are safe from these fierce but valuable little creatures. As soon as hatched, the larva crawls down into the midst of its garden of Eden, a whole field of



Fig. 4—Larva ready to spin.

aphis eggs, or any others belonging to the insect kingdom. It now rests for an hour or more, sometimes two days, according to the weather, when the first skin bursts, and out walks a personage which will make an impress on his or her age. No time is lost, every egg near by is sucked by its long sickle jaws, and the "slaying of the innocents" is enacted with terrible fidelity. The jaws are as simple as possible in construction, two long bent pieces of hollow horn, with tubes running down them, which unite into one, passing through the entire body, nourishing every part most affluently. Indefatigable industry, and an insatiable appetite, render it to us, if cherished and allowed its own way, a member of the most valuable family of insects we have in this country, and which is apparently augmenting every

season—the new genera seem inexhaustible.—The larvae likewise of every other insect are acceptable to them, even the troublesome inch worms (the Geometridæ) fall victims

to their gormandizing proclivities. They are found scattered on every plant, at some seasons much more numerous than at others, and we can not conceive the immense obligations we owe these insects, in garden, orchard, and field. The larva is, I allow, exceedingly ugly indeed—I confess more, the very ugliest in the kingdom, except that of the dragon-fly, one of the same family. They are of various colors. The one here represented, Fig. 5, was of a pale sickly greenish color, with two lighter spots on the three segments on which the dumpy awkward legs are placed. The legs

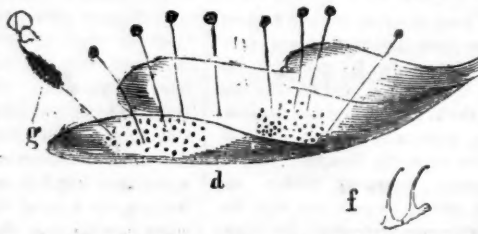


Fig. 3—*d*. Leaf with eggs on their supporting threads.—*f*. Single egg.—*g*. Newly hatched Larva descending.

have black hooks on the last joints, enabling them to move quickly, and to hold on very firmly when the wind is high, by passing them through the long hairs with which all leaves are more or less clothed. It is covered on the body with short black hairs, and small black dots, its antennae filiform (thread like). The eyes are very conspicuous, but have none of the brilliancy of those of the perfect insect. After it has studied murder in an artistic and practical light long enough, and can gormandize no longer, it is swollen to an enormous breadth, and must rest, sometimes three days, I suppose to allow the juices of its body to

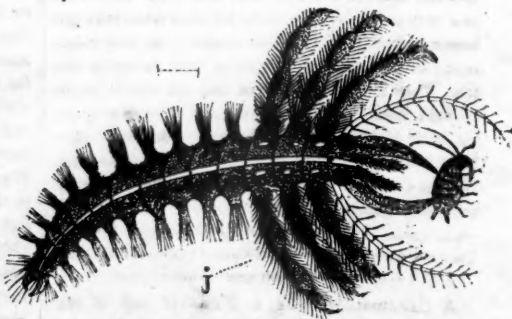


Fig. 5—The Larva attacking an aphid.

concentrate themselves, and it then soon becomes ready to spin its cocoon. It is shown at Fig. 4.

The one here represented, began his in an extraordinary manner, whether it is the usual way or not, I am not able to say. All the others I have seen operate, were in confinement. The end of a leaf was caught between his fierce jaws, (see Fig. 6.) his tail began to move back and forth in a most violent manner, until a little cloud of fine silk in a half circle was evolved. I am under the impression this mode is adopted until much of the fluid has passed from the body, and the skin is loosened so as to allow freer action. With a spring that you would suppose might have knocked him into "next Summer" he brought him-

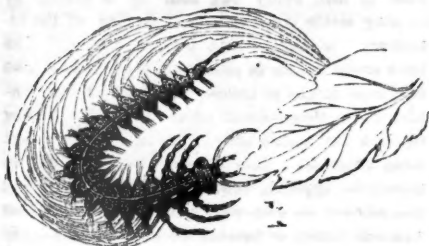


Fig. 6—Larva commencing its cocoon.

self flat on his back upon the leaf, the silk floating over him, which was soon gathered up and fastened to the leaf. Within, he lay gazing at his tail, watching it as it moved to and fro—at last the silk became so thick, no more of his maneuvers could be seen; at the end of two days all was still within. The pupa (fig. 7) is what may be termed necromorphous, changing within the sack formed by the larva; its parts are very distinctly seen; the large eyes protruding, the wings folded up into the smallest space conceivable. It is one of the most wonderful circumstances in nature, how it is possible for these comparatively large flies to emerge from a ball of such small dimensions. The pupa case in the interior is so stout, it resembles paper—exteriorly, it is slightly woven as a cocoon. The ends of both the pupa case and cocoon at one extremity, are left, if not open, yet so loosely confined, that the fly when ready to emerge, works its way out with ease.



Fig. 7—Cocoon, Pupa case and Pupa.

But the labor is not over yet, it is still enclosed in a very thin covering, from which it must emerge before it becomes a perfect insect. At this stage many of them die exhausted in the struggle for life. They are beautiful—all that are known to us as yet; their wings and eyes are always exquisite, even if their bodies are dark. But the ugly larva! Can any thing be more explicit, than that Nature does not always make the most useful, the most beautiful? How true then it is that "The Useful is the Beautiful, the good and kind and true, To feature and to form impart their own celestial hue."

A CATERPILLAR FOR A PET.—If any of our readers who have now an utter aversion to every species of worm, will, during this month, find one of the largest specimens, such as they would term the *ugliest*, put him in a secure place, supply him daily with such leaves as he likes, and minutely observe his changes as they occur, they will soon become interested, and derive pleasure from what was disgusting before. A paste-board box, containing a little earth, with a gauze cover to admit air, will answer every purpose. In this, the pet caterpillar will cast his skin, weave his winding sheet, change to a winged insect, and come out in a beautiful dress, and thus reward you for your trouble.

Blinks from a Lantern.....XX.

BY DIOGENES REDIVIVUS.



A GRAND EXPERIMENTER.

It is sometimes said, that we can not have too much of a good thing. Our friend Higgins is very much of this opinion, and notwithstanding his somewhat melancholy experience in importing rare breeds of swine, feeding beeves on turnips exclusively, and making his fortune on a thousand hens in one inclosure, he still perseveres in the pursuit of knowledge under difficulties. In all my lamp-lighted exploring tours, I have never found a man that showed so much courage under overwhelming defeats. One should have thought that the long pickerel nosed sow, with her alligator brood, would have shocked his nervous system so severely, that he could never look upon swine's flesh again without convulsions. Not so with Higgins. He has indeed done importing from across the waters, but Isaac Stickney's best are now in his pens, and you will find Higgins on any Saturday morning when he gets home from the city, surveying the stubb nosed Suffolks with the greatest complacency. He now claims that the nose is the grand hinge on which all future improvements in swine must turn, that the ham is always in inverse ratio to the snout. He thinks he has now settled it beyond controversy, that swine are available for pork, just according to the shortness of the nasal protuberance. Accordingly he offered a premium last Fall, at the County Agricultural Society, for a swine that should have a shorter snout than his boar Pericles.

A shrewd Yankee, by the name of Hogg, immediately put a pig in training for the prize. At two months old, the snout was bored with two wires, and strapped firmly behind the ears, so that it had as poor a chance to elongate as the foot of a Chinese beauty in bandages. A funny pig was put on exhibition at the fair, and Mr. Hogg won the prize by one fourth of an inch over the Boar Pericles. Higgins, not being in the secret of the training, declared that he never paid over a "V" with more satisfaction. What sort of progeny will come of this training remains to be seen—it is an interesting problem.

Last Fall, Higgins was a good deal exercised on raising wheat. He read up the authorities on this subject, and came to the conclusion, that ammoniacal manures were the one thing needful for the wheat crop. The papers recommended stale urine as a steep for the seed. This was certain to kill all the eggs of insects, and to remove smut. The thing looked reasonable, and Higgins saved a barrel from the manure gutters in the barn, and soaked his wheat in it for two days. He noticed that the kernels were remarkably swollen, and a little soft at the sowing, but suspected no evil. He put in the seed in September, and looked with confidence to see the rank green spires starting in about a fortnight. Not a blade was visible. Three weeks went by, and nothing but weeds began to start. What could it mean? He dug down in several places, and found the kernels a mass of moldy paste. Stale urine had indeed killed the insects, but the wheat went with them. He lost ten bushels of wheat, that cost him eighteen dollars, to learn the difference between wetting seed in urine, and soaking it two days. "Valuable knowledge even at that price," said Higgins, pocketing the loss and the wisdom with the calmness of a philosopher.

Higgins is something of a fruit grower, that is to say, he attends the meetings of the American

Pomological Society, and reads the biennial report of that exemplary body. He also takes Hovey's Magazine, the Horticulturist, and divers other journals, that treat of rural affairs. In an unlucky hour, he read of coal tar as an infallible remedy against the borer, and against rabbits, and all other animals that gnaw the bark of trees. Now Higgins had suffered a good deal from the apple worm, and it was only by the utmost vigilance, scraping and cutting out twice a year, that he had been able to save his young orchard, a plantation of five hundred trees. This labor was irksome, and gave him a back-ache at least twice a year. He read of coal tar in one of these weary seasons of borer hunting, and it seemed a god-send. He took it for granted that tar was to be applied to the bark, and, with swab in hand, daubed on the hot liquid. The deed was done in Spring, when the trees were full of sap, and they did not immediately begin to wither; but as the Summer came on, the trees suddenly stopped growing, and assumed a sickly hue. Not a dozen of them escaped the grand experiment. The trees had been out four years, and had cost him over a dollar a piece in money and labor, to say nothing of the loss of time. Two hundred dollars were sunk in a single experiment, to teach him that coal tar should be applied to canvas, and not to the bark of fruit trees. "Rather expensive," exclaimed the philosophic Higgins, "but there is no great loss without some small gain. Oven wood will be cheap and plenty."

It is quite manifest from the example of Higgins, that not every man is qualified to conduct an experiment with safety to his own pocket. It is not strange that so many cultivators of small means are backward in trying a new method, or a new crop. Many of them have been bitten, and instead of learning carefulness, have learned stupidity. They dread an experiment, as a burned child dreads the fire. They have learned but one way of raising a given crop, and the operations of one year are as much like those of another as is possible. They become strictly routine farmers, applying as little thought to their labor, as their beasts of burden and draft.

It is also apparent that very much greater care is needed in recording experiments. Not half the records published, give us all the details necessary to enable an intelligent cultivator to repeat the experiment with safety to his animals, or his crops, as the case may be. Important particulars affecting the result essentially, are omitted. It is clear enough to every one who has studied vegetable economy, or who has experimented, that hot coal tar applied to the bark of trees will kill them. But not one in a thousand of our cultivators have made the experiment, and a loose statement like that which entrapped Higgins, is likely to destroy many valuable orchards, and to sacrifice hundreds of thousands of dollars.

Such mischievous articles are circulated and read more extensively than they were ten years ago. It is the fashion now, with both religious and secular journals, to have an agricultural department, and the agricultural exchanges are put into the hopper of the office editor, who possibly knows a cabbage from a carrot, and the grist comes out good, bad, and indifferent. There is little discretion in the scissoring, and the agricultural column, though publishing much valuable information, sows broadcast the seeds of error in thousands of families that are never visited by a reliable agricultural journal, and thus all agricultural literature has come to be undervalued. If there is any thing for which farmers can afford to pay the highest price, it is for sound, well defined teachings in husbandry.

How Shall I become a Farmer?

This question is frequently asked of us personally and by letter. The inquirers are of many different classes. Mechanics tired of confinement in close workshops, look to the green fields, and long for the freedom of the plowman. Citizens who have accumulated enough for a moderate income, find themselves straitened by the expensiveness of city life, and see in the economy of rural habits a remedy for their perplexities. With bread from their own fields, butter from their own dairy, chickens from the poultry yard, and vegetables fresh from the garden, at only the cost of raising, they could afford to fare sumptuously every day, and as for the purple and fine linen, that need not be worn in the country. The school-boy too, who has spent the happy weeks of his Summer vacation in frolicking over the hay field, scampering through the woods and feasting on bread and milk, is charmed with the idea of being a farmer, and enjoying the pleasures of the country the whole year round. From all these and many more, the question has come, "How shall I become a Farmer?"

First, a word of caution is needed. Though country life is desirable, it is not all a round of pleasure; though its gains are reasonably certain, they are yielded only to patient, continued hard work. The plowman sweating in the blazing sunshine, envies the mechanic in his shop; the economizing farmer sighs for the quick returns enjoyed by his fortunate city acquaintance, and the weary boy who follows the cart with his rake, would often gladly exchange his lot for that of the schoolboy who wants to be a farmer. Hundreds are every year deluded with mistaken notions of the pleasures and profits of farming—they do not count the cost. We fully believe that the benefits are worth the cost, but we are certain that of every ten who leave other avocations for farming, without some previous practical experience of the realities of farm life, nine will meet with discouraging disappointment. The multitude of places for sale at a sacrifice in the neighborhood of all our large cities, by men who have tried the experiment, is proof of the assertion. They met with unforeseen obstacles—the business of cultivation of itself difficult enough, was rendered doubly so to them from want of experience. Crops were put in at wrong seasons and in the wrong manner; the garden would yield weeds as well as flowers, and insects completed the destruction; good help was not obtainable, and the dairy was a failure; and at the end of the year, the accounts properly balanced, would read "Cr. by experience gained, many dollars out of pocket"—more or less according to the extent of the experiment. This too is in addition to the deprivation of many privileges which long habit had rendered necessary to enjoyment. Dark as this shading is, it need not have spoiled the final picture, had it been seen in time and calculated upon. A few years, and steady perseverance even under discouragement will bring all right, and he who would make the change proposed, should enter upon it expecting a period of hard times, then, he will not be disappointed, and may go on courageously to final success. If you can stand the "toughening" process, you can become a farmer, if not—and it will be severe—don't attempt it.

But we will suppose all this has been settled, and a young man knowing little or nothing of farming, has fully determined to go through thick and thin, and make soil culture his profession; how shall he best accomplish it? He needs first practical knowledge of the use of farming im-

plements, and this he can gain by engaging to work as a "green hand" with some intelligent farmer, upon whom he can rely for kind treatment and judicious oversight. The first season, he must be content with apprentice's wages, satisfied if he may receive enough to board and clothe him decently. Let him learn to handle the plow, the hoe, the scythe, and make a business of "getting the hang" of every tool used in farming. While doing this, day by day, let him keep his eyes and ears open to all that concerns the various operations, and not be ashamed to ask even the simplest necessary questions. Occasional leisure moments will be well occupied in studying agricultural periodicals and books. At the year's end he will, if attentive, know wheat from barley, be able to plant and hoe corn, and dig potatoes, to cut a ragged furrow with the plow, and perhaps a raggeder swath with the scythe, in short, will have made a beginning; and if careful, will find his muscles better able to perform the increased labor of the following years. Having in one or more years as may be necessary, thus learned the first steps, let him begin to walk alone, by undertaking something on his own account; it would be well to hire a small field, and arrange for time to work it. Let him advise with others, and then decide for himself, as to the best crop and manner of cultivating, and expect but a small return, and he will, when the crop is harvested, have learned more of management, than years of merely working for another would have taught him. His progress after this will be easy, if he have studied as well as worked. He may soon, with little aid from others, conduct a farm successfully, working it on shares, or hiring at a stipulated price, and by skill and economy begin to accumulate capital for the purchase of a few acres as a nucleus of his future farm. This is but a mere outline, but sufficient to indicate what may be done by a young man in earnest to become a farmer—with ordinary intelligence he can arrange the details, without it he need not try the experiment. We have not space to pursue the subject further, and illustrate how a man engaged in other business, and having a family, may secure a home in the country which shall give him a livelihood, but may recur to the subject on another occasion.

How to Mow.

A smile wreathes the lip of our veteran farmer, as he reads the heading of this article. Can an Editor teach me anything new in that line! Oh no, sir, perhaps not, but let us hint a word or two to your sons, or to some young men who have not such skillful fathers to teach them. We want them to learn this art aright, then they will never forget it.

This is one of the most fatiguing operations of farming, and the more so, as it has to be done in very warm weather. Any hints to lighten the labor will be very useful. In the first place, then, rise early, and begin before sunrise. By doing so, and having your scythe sharpened and in perfect order the night before, you may get half a day's work done by nine o'clock. The coolness of the morning air, and the dew on the grass, will both help along the labor. At nine o'clock, you may retire to the house, or to some shady tree, and rest yourself for several hours, while your slow neighbor is sweating through the mid-day, and perhaps hurting himself by over-work and by taking down large draughts of cold drink to allay his thirst. Between two and three o'clock you may begin work again, refreshed and vigorous, and may labor till sunset with little fatigue.

By all means keep your scythe constantly in good order. Let it be adapted to the surface of the ground to be mowed. If that is level and free from obstructions, the scythe may be long and almost straight, and it will work easy. If the ground is broken, or covered with stones or low stumps, the scythe must be short and crooked.

While the snath should not be too heavy, neither should it be so light as to tremble and shake in the mower's hand: also, let it never become loose from the blade, as this will cause it to catch on every obstruction, and require a great waste of strength to make it cut. Many young mowers, in their haste to get over a certain piece of ground, often worry themselves by this little neglect.

It is very pleasant to mow in company, but young and inexperienced mowers should be careful how they pit themselves against the brawny arms of older and stronger workmen. Many a promising young man has been injured for life by this ambition to be thought a great mower.

Hoping that our young laborers will be careful when following close to each other, we commend them to their noble work, and hope they will pass through the hay-harvest in good health, and gather abundant crops.

For the *American Agriculturist*.

Experience in Raising Spelt.

In the April No. of the *American Agriculturist*, I noticed an article on Spelt, (*Triticum spelta*), which brought to my mind the fact that my father and neighbors cultivated the Winter variety quite successfully some twenty five or twenty eight years ago, in the southern part of Pennsylvania, (York Co.) It was generally sown on soil that was thought to be too poor for wheat, and yielded good crops each year, being much more certain. The plant seemed to be much more hardy than wheat, less injured by freezing out, and seldom injured by the depredations of that arch enemy of the wheat crop, the Hessian Fly, which was so very destructive about that time. The color is a blueish green; it grows nearly as high as wheat, the head about 2½ to 3 inches long, and somewhat closer than wheat. In threshing, the stalk breaks between the grain, leaving the grains enclosed, two by two, in their own husk or chaff, which is somewhat looser, but much thicker than oats; and although Dr. Löbe describes the straw as being softer than wheat, yet to my certain knowledge the contrary is the fact,—in that section of the country the straw being stiffer and harder to cut than the stiffest "blue stem wheat." After threshing, two bushels would generally yield one separated from the husk, which was usually done with the old fashioned shelling mill—viz: a pair of sand stones run loosely together, so as not to mash the grain, with a fan underneath, to blow aside the chaff as it fell from the stones. The grinding and baking were about the same as wheat. It yielded a fine delicious bread, very light and spongy, but of a richer, somewhat more yellowish white, than wheat. The chaff, or husk, after shelling, is very useful for beds, and is much more cleanly and more elastic than straw.

There was considerable raised for several years with good success. The farmers then commenced improving their farms, and the Hessian Fly became less destructive to the wheat, when their attention was mostly turned to that grain, and the spelt almost, if not entirely, abandoned.

My opinion respecting it is, that where wheat thrives well, it will not pay to raise spelt, but

where the wheat crop is so liable to fail from a want of snow during Winter, or from any other cause, as in southern Illinois and many other places, it would be a much surer crop.

Brown Co., Ill.

WM. W. BOWER, M. D.

Hints on the Root Crops.

We have just fed out the last of our carrots, and the only fault we have to find with them, is, that they are gone. The quadrupeds that have fed upon them, from the horse in the stable to the pig in the sty, coincide in this lamentation. We are sorry that we had not raised two tons more, both because our neighbors want to purchase, and we want more to finish out the season. We have fed ruta bagas, carrots, sugar beets, and mangel wurzels, and like them, all so well, that we shall plant more of them all than we have ever raised before. Each of these roots has its peculiar advantages, and every farmer who has the usual variety of stock upon his farm, should raise them all. All domestic animals crave a variety of food, and will thrive much better upon a half dozen different kinds, than upon any one. They not only eat a larger quantity of food, but it is more perfectly assimilated, and the farmer gets a better return for his fodder, in the growth of his animals, or in beef, milk, or butter.

We have never found any thing to bring out horses and cows in so good condition in the Spring, as a diet partially of roots. They are particularly valuable in the three Spring months, before cattle are turned out to grass. They are full of juice, and are highly relished with the dry hay and meal to which cattle are often confined at this season. They keep the bowels loose, and the appetite in uniform good condition. We have never had the slightest case of illness among animals fed on roots.

The carrot is the best of roots for horses; fed a peck a day with other food, they aid digestion, and keep them in good flesh. We think a diet of hay, oats, and carrots, half and half of the last two, is the best food we have ever tried for horses. They work as well as when fed with hay and oats. Carrots are also admirable for milch cows and for young stock. They increase the richness of the milk, without adding any unpleasant flavor. This objection is brought against a diet of turnips, and for this reason they should be fed to other animals—oxen, fatlings, and young cattle. The sugar beet is more nutritious than the ruta baga or the mangel wurzel, but does not yield so large crops. The mangel gives the largest crops to the acre, sometimes reaching forty tons. Its keeping qualities are excellent, and it should come in for feeding in the Spring months.

These roots economize land, and should receive a large share of attention from those farmers who live in the suburbs of cities and villages, where land is dear. The yield will vary from five hundred to two thousand bushels to the acre, according to the quality of the soil, and the amount of manure and labor expended upon it. With extraordinary treatment, much larger crops than these are sometimes realized. The land that produces three tons of hay to the acre, may be made to yield twenty five tons of carrots, which would have five or six times the nutritive value of the hay. In no way can a farmer get so much valuable fodder upon a given piece of land, as by root culture.

The bearing of these crops upon the compost heap, is a very important advantage. The manure voided by an animal fed on roots, is enormous in quantity, and of very good quality,

though not equal to that made by feeding grain and oil-meal. If properly cared for, and mixed with muck under cover, it will take but one season to make a farmer a warm advocate of root crops.

The strongest objection brought against the cultivation of these roots, is the fact that farmers have never tried them. The labor of cultivating, harvesting, and storing, is generally overestimated, and the stereotyped farmer keeps on with his hay and grain. We greatly desire the class of our readers who own small farms, and want to make the most of them, to try roots, even if it be no more than a quarter of an acre. The great thing is to make a beginning, and to see with one's own eyes the enormous quantities of food the soil will yield in roots. Prepare the ground thoroughly, and manure as heavily as for the largest corn crop.

In all latitudes north of this, the first of this month is not too late for sowing the seed. We have for years sown a portion of our carrot seed in June, and got fine crops. The turnips may be sown still later. The beets should not be delayed. Try roots.

We Want Good Butter.

The dairying season is now at full tide; the milk pails overflow with their foaming treasures, the pans are crowned with rich cream, and golden nuggets of butter are ready for transportation to the market, there to be minted into solid coin. The quantity of dairy products brought to this market alone, would surprise a novice; the quality of much of it is still more astounding. An average of 500,000 lbs. of butter per week is consumed in this city and vicinity; 100,000 lbs. would be a full estimate of the prime article to be found in the whole quantity. The price paid for the best sorts, over the inferior, would seem to be inducement enough to furnish a good article in abundance, but, when purchasing family supplies, we have often sampled and tasted large lots—smelling was enough in many cases—without finding a single desirable firkin. Scarcely a country housekeeper would allow such trash to appear on her table; indeed, visitors from the country find the poor butter here, one of the greatest drawbacks to their pleasures at the table. Why then is such butter sent here? From some sections, no doubt, because it is poor. A neglected churning is found unfit for family use, and is "sent to the store" in barter for other necessities; the merchant pays one price to all customers, packs it all, yellow and pale, pure and poor, waxy and greasy, in one firkin; the better quality is soon corrupted by evil communication, and when opened in market, all is thoroughly vile. If country dealers would fix the price according to the quality, much of this would be remedied. Housekeepers have little encouragement to do their best, when a pound of grease, fit only for the soap-maker, buys as much sugar as a pound of good table butter.

Dairymen who produce a really superior article, are often surprised at the small returns received from the distant market. Their neighbors exult in two or three cents more per lb. obtained for the same quality, and sold by the same commission merchant—there must be a mistake somewhere. The mistake is at the dairyman's door. His neighbor procured new firkins or tubs this Spring, has kept them neatly painted, with his name plainly marked in full upon the cover. A grocer or hotel keeper was attracted by the promising look of the package, tried it, found it good, and engaged it for the season—the brand was established, and will always sell well while

it keeps its reputation. Our less fortunate friend made the old pail answer, marked it with a cross or a notch which he would know, and sent it along. The weather-worn and rusty pail was overlooked by the best customers; it was set with the second softs, and sold for second prices, to the joy of the purchaser, and the loss of the economical dairyman. Three cents per pound on thirty weight of butter would pay for a new pail every week.

But the great drawback in the quality of our butter is the want of *elbow grease*. It is not sufficiently worked. It leaves the dairy apparently sweet and fresh, and is so for the time, but the ladle or the roller were sparingly used, the buttermilk and sour milk soon become rancid, and five to ten cents per pound loss is the penalty. It would be thought a hard law that inflicted a fine of that amount for every pound of poorly worked butter, but the inexorable laws of trade do impose just such a fine; no excuses are received, no penalties remitted, and there is no appeal. But on the other hand, good butter, nicely packed, and carefully forwarded to honest dealers, invariably receives a premium, which we wish all our dairymen would compete for, and part of which we will cheerfully pay.

Remedy for Short Pastures.

Those who have but a limited range of pasture and keep stock enough to crop it well, are almost at the mercy of the weather. If there chance to be favoring rains, and a good season for the growth of grass and clover, all is well; but if, as frequently occurs, there comes a long period of drouth, the browned fields already closely cropped, suffer severely, having little to protect the roots from the full power of the sun, and the cattle suffer yet more. The milk pails show serious diminution, the dairying profits shrink, and the stock fall off when they should be gaining. A severe check of this kind will be felt too throughout the season, for much of the pasture may be "Summer killed," and the full flow of milk can hardly be regained. This may be guarded against by putting in a small plot of corn, sorghum, millet or other suitable crop for cutting and feeding green. An acre of corn sown broadcast now, will very soon yield sufficient to give great relief to the short pasture. It is not necessary to stable the cows; cut a good supply for them, and feed night and morning before they leave the yard; they will eat it with a relish, and make ample returns in the milk pans and the churn. Even if the threatened drouth should not come, and abundance of grass should grow, the soiling crop need not be lost. Cut at the proper season, and properly cured, it will not come amiss next Winter.

What is "Five Finger."

A correspondent inquires what this plant is, the name of which he has often met with in the *Agriculturist*. He is fortunate not to have found it in his fields. It might appropriately be called the hand of poverty, gleaming among poor soils for scanty nourishment which clover or any decent grass would disdain to accept. The botanical name is *Potentilla Canadensis*. It has a branching stem, from three to eighteen inches long, resting on the ground; the leaves are hairy, and spread out in fives like fingers (whence its name) they somewhat resemble strawberry leaves; it bears small, yellow flowers. It comes in where grass starves out, and is a sure index of unthrifty farming. Good manuring, or a top dressing of plaster, or lime will help to banish it.

Culture of Flowers.

Farmers seldom devote much time to planting ornamental trees or to flower-gardens. To clear up the land of its forest trees and stumps and stones, to fence and to manure, these are the great objects of the farmer's life. Trees are sometimes set out, but they are chiefly such as bear fruit. Of course, these fundamental and practical things should be looked after first; but when these have been attended to, why not add other things attractive to the eyes of visitors and to the family, both the young and old? Shade-trees, shrubs, vines and flowering plants make one's house look better and enhance its value.

Let the farmer begin his improvements by making a first-rate kitchen garden. Stock it well with asparagus, rhubarb, currants, gooseberries, raspberries and grapes, and let it abound with beets, onions, lettuce, radishes, tomatoes, melons, and a multitude of other good things which such a garden can be made to yield. The comfort and healthfulness of such a garden will naturally lead on to something else. At least, if the farmer have a sensible wife and intelligent children, he will not fail to gratify them with some flower-beds. At first, it may be only a border next the patch of beets and onions; but with improving taste, he will indulge them with a flower-plot by itself. And pray, what will it contain? Why, of course, those old favorites—lilacs, roses, honeysuckles, flowering almonds, and syringas, among the shrubs; and columbines, larkspurs, monks-hood, pinks, peonies, foxgloves, etc., among the herbaceous perennial plants; and then will be added any quantity of annuals. Good so far.

And it won't be long before the sensible man will wonder that he had neglected, for so many years, to give his family this source of enjoyment. How happy my wife is of late, he will say to himself, I verily believe she has grown ten years younger; and my daughters, how charming they look with their hair and their bosoms decked with flowers of their own raising! My money-loving neighbors tell me that fine gardens don't pay. Perhaps they don't in dollars and cents, but they do in something far better. The song of the robin don't pay, nor does a fine landscape, nor does the ruddy hue of my boy's cheek and lip, or the kiss of my bright-eyed daughter; but I value them none the less.

Sensible man, you are on the right track.

Money-value is not the highest standard by which to estimate many things. Try them rather by their tendency to improve the character, and to promote real happiness. Pure pleasures, cheap enjoyments, those which leave no sting behind, and which add to our knowledge and improve our hearts, are most truly desirable. Let

what a feast of the senses! To the mother, what place more suitable for instructing her household in lessons of beauty and virtue?

Management of Dahlias.

As the first of the present month is an excellent time for setting out dahlias, we will say a

few words about their culture. This plant is not fastidious about soils, yet it succeeds best in good garden mold, not very stiff with clay, nor very light and porous with sand. It is a rank grower and feeder, and needs some degree of moisture at the roots in mid-summer. Deep trenching at the outset, and mulching in hot weather, will supply this necessity.

Propagation.—If one has a fancy for raising new varieties, he can do so by sowing seeds. In this way, he will get some flowers the first season, some good, others bad, and indifferent. Only a few out of a hundred seedlings may be worth preserving, but it will be very pleasant to watch their wonderful sporting from a single packet of seeds.

A more common way, however, is to propagate by cuttings from, or divisions of old roots. Set the roots into a half-spent hot-bed, and the buds will soon push out. When they have made a few inches' growth, cut them off close to the tubers, and pot them, and they will grow like any cuttings. As soon as they are well-rooted, they may be transplanted into the open garden. The old roots may be re-set in the hot-bed, and a

new crop of cuttings obtained. In this way a multitude of plants may be had in one season from a single root. For nurserymen who wish to propagate largely for sale, this is an excellent mode.

Still another method, and the more common one for amateurs, is simply to divide the last year's roots, in the Spring, and set out every tuber that can be got off in connection with a bud at the crown of the root. [And here, let us caution the inexperienced against the mistake of a friend of ours, viz.: roughly breaking off the mere tubers and planting them, but throwing away the neck or crown of the root, which alone contains the buds from which the plants grow!] If the old roots are set in any warm place, the first week in this month, and covered with a little earth, they will soon show their buds. Now, cut carefully between, with a sharp pruning knife, allowing one bud to each tuber. Then, set each piece of root in the garden where you wish it to grow, planting them three or four feet apart, and



A BOUQUET OF SUMMER FLOWERS.

it never be forgotten that our minds receive a bias for good or evil, from the occupations of our hands. And can any harm come from the culture of flowers? What a dreary place would this world be without them! It would be as a face without a smile, a feast without a welcome."

How many things in a flower-garden to interest young and inquisitive minds. For example, note the convolvulus closing its petals at the approach of a storm; the tulip and many yellow flowers shutting up in hazy weather; the Mexican tiger-flower, the morning-glory and others open in the morning and shut at noon; the evening primrose open at sunset; the sensitive plant shrinking at the slightest touch; the Fraxinella, in a warm, damp evening, emitting a gas which will ignite if a match is applied, and burn for some time without injury to the plant, etc.

For the man of business, nothing can be more refreshing than the garden. To the student weary with brain-toil, what a relaxation! To the child

covering the buds with two inches of soil, the tuber, of course, being deeper.

Previous to planting, prepare stakes, and set them firmly in the ground where the plants are to grow. These stakes may be common cedar poles, six or eight feet long, or they may be handsome stakes of pine, planed smooth and painted green. If one desires to have them very nice, six inches of the upper part of the stake may be painted white, and the name of each Dahlia written upon it. Well turned and neatly painted, hard wood stakes, of different lengths, are kept on sale by most seed dealers.

As the plants grow, tie them to the stakes with bass-matting or any soft strings, continuing this work all Summer, or until the plants are full-grown. If this is neglected, one's plants are quite sure to be broken down by the winds. Only one strong shoot should be allowed to grow on each root, and this should be moderately pruned of its lower and lateral branches. But who will show us how to get rid of the insects which often infest the flowers, just as they begin to expand, eating off the petals, and even boring through the stalks, causing them to break off? Hand-picking is laborious, lime-dust and ashes, and tobacco-water injure the blooms. If one has but a few plants, the flowers may be protected by drawing caps of gauze or lace over them.

In the Fall, after the frosts have fairly killed down the tops, choose a dry day for housing the roots. Dig them up carefully, or you will break off half the tubers. Take them up in the morning, let them lie in the sun and wind all day to dry; then store them away in the cellar, covering them with dry sand.

Select list of Dahlias.

From our own experience of several years, with the following varieties, we can earnestly recommend them:

Agnes, pure white; *Aurora*, orange buff; *Admiration*, white, tipped with scarlet; *Beauty of Bath*, fine yellow; *Beauty of the Grove*, salmon, tipped with purple; *Claudia*, purple, tipped with white; *Incarnata*, white, shaded with rosy purple (extra fine); *Grand Duke*, purplish crimson, perfectly globular and a great bloomer; *Douglas Jerrold*, buff, edged with scarlet; *Forget-Me-Not*, crimson, tipped with white; *El Dorado*, fine yellow; *Gem of the Grove*, dark maroon; *Mrs. Hansard*, yellow, tipped with white; *Princess of Wagram*, bluish white, edged with deep rose.

Manure for Flower Beds.

Enthusiastic florists will not be over fastidious in the use of materials necessary for their growing treasures, but they may be pardoned for wishing to employ the least offensive substances. We have seen beautiful flower beds much disfigured by coarse stable manure spread upon the surface, and the perfume of the flowers did not always conceal a less agreeable odor. The dark earth found in woods, consisting mostly of decayed leaves and other vegetable matter, is excellent plant-food. It is quite extensively used in green and hot-houses. It is very cleanly, and gives that pleasant mellowness to the soil, so agreeable to the gardener, and so favorable to the plants. For more stimulating manure, dry bone sawings mixed with an equal part of earth, answers an excellent purpose. A solution of guano in water, though rather pungent to the olfactories when first mixed, is not permanently unpleasant when sprinkled upon the ground. A mixture of leaf mold, earth, and bone sawings is on the whole preferable.



Orchids, or Air Plants.

LYCUSTA DEPPII.

The cultivation of this class of plants is rapidly extending in this country. Where they have been introduced they are great favorites: an intelligent nurseryman lately assured us that they will soon supersede very many varieties that have long been standards in the green-house. This he judged, from the constantly increasing orders received, to the comparative neglect of others previously in demand.

They are commonly called air plants, from the fact that their roots in many instances shun contact with the soil, and draw their support from air and moisture alone. The native habitat of most species is in the damp atmosphere of dense woods, or on the banks of streams, in tropical climates. A large collection obtained in the forests of Southern Mexico, was recently disposed of in this city. They are mostly parasitic plants, being found attached to the trunks and limbs of trees. In these situations, they are of course subject to great extremes of weather, being exposed during the wet season to constant drenching, and having to withstand months of Summer drouth.

It is only in the former season that growth is made; they remain torpid the rest of the year, burning summer is winter to them. These remarks are not applicable to all species; and the great difficulty of maintaining an extensive collection consists in the variety of circumstances in which they grow naturally. Each kind must be studied and treated according to its own peculiar habit. Some would drown where others would parch.

We are indebted to Dr. Andrew Knight, for a description of the beautiful specimen illustrated above, the *Lycusta Deppii*. It was derived by propagation from plants sent by Mr. Deppi, from New Spain, to the Messrs. Loddeges, floriculturists, near London, in 1828, under whose skillful management it soon flowered, and was much admired.

The flowers are very large and beautiful, measuring nearly four inches across. The sepals or

outer coverings are three in number, and are of a dull green, spotted with purple. The petals are white, two disposed laterally, and a lower one, called the labellum, or lip, is of a bright yellow, and spotted with purple. In the center of the flower is a column peculiar to all orchids, which is supposed to resemble some living creature, as birds, insects, etc.; by the natives they are highly venerated as favorite offerings in worship. The stem, or scape as it is named more properly, is from five to six inches long, and arises from the base of the pseudo bulb (a protuberance resembling a bulb,) having several distinct sheathed joints, and terminating with a single flower. A fine specimen plant of half a dozen bulbs, bearing from six

to eight stems and flowers from each bulb, makes a most splendid display. In June last, a fine plant bearing about thirty flowers, was shown at one of our exhibitions.

This species grows well when fastened firmly on a compost of broken pieces of fibrous peat the size of walnuts; intermixed with moss and broken pieces of flower pots, which permits the water to escape freely, whilst the moss maintains a uniform moisture, and more especially, if put into wire baskets in a moist atmosphere. It prefers a temperature of from 65° to 70° Fahrenheit.

Tritoma Uvaria.

This is one of the newer plants which amateurs will do well to procure. An English authority speaks of it as "the king of all plants for out-doors." Another says: "It is the most beautiful hardy perennial now seen in a visit to the Kew Gardens." It often has from thirty to forty spikes of flowers, from four to six feet high, the petals of a brilliant orange red. Using this as a center plant on a circular bed, and surrounding it with *Lobelia grandiflora* and golden *Calceolaria*, is said to produce a fine effect.

Some of our enterprising florists have introduced one or two varieties of it within the past year. The last Report of the Massachusetts Horticultural Society, describes it as follows: "The root of the plant resembles that of the New-Zealand Flax; the leaves are very long, proceeding from the crown of the plant, tough and fibrous, of a dark, clear green, the two edges raised, so as to present a channelled center; from the midst of the crown of leaves proceeds the flower stem, which grows three [or more] feet high, and is often an inch in diameter, very stout and erect. The flowers are produced in a whorled close head, about eight inches to a foot in length, and continue a fortnight or more. * * * The plant perfects seed freely, and is propagated by seed and by offsets, which are produced from the crown of the plant. * * * This very ornamental and desirable plant is hardy in Eng-

land, with slight protection, but would not probably endure our northern Winters. It should be taken up before frost, and wintered in a greenhouse or light cellar."

A Floral Curiosity.

To obtain flowers of different colors on the same stem (or apparently so,) split a small branch of elder lengthwise, and having scraped out the pith, put into each part some good soil, mixing with it several seeds of different plants, but which bloom at the same time. Then tie the split pieces together, and set them out in a pot or box filled with mold. The seeds will soon germinate, and the plants grow up together with their stems and branches and leaves so intermingled, that to the common observer they will appear to grow from the same root.

Talk at the Gate.

BEGINNINGS FOR FLOWER BEDS—SPARING THE BIRDS.

John.—Before you go, brother gardener, do tell me why you don't like grass for bordering flower beds?

Gardener.—I have no prejudice against it; only, I must say that having tried it a long time, I have at length discarded it, as not quite answering my purpose.

John.—But why? I have tried box, and while it is very neat, don't sucker and spread, as grass does, and is easily trimmed, and has evergreen foliage, I have, after all, condemned it, because with me, in central New-York, it is not perfectly hardy, has to be protected in Winter, and even then, it looks in Spring like a singed cat. Besides, it is so stiff and prim, like a precise old bachelor. I have gone back to grass—not, mind you, to quack grass, nor timothy, nor red clover, but to fine, delicate June grass, cut from the roadside after being pastured close by sheep.

Gardener.—Well, every one to his mind. I have lately used the common Stone-crop, and I like it well. Hardy as grass, evergreen, has no long roots to burrow into your beds and gravel-walks, and needs only an occasional trimming with your spade to keep it in order. It burns out a little in spots in mid-summer, but such gaps can easily be made good.

John.—I must take a look at your borders some day when I have leisure; perhaps I shall learn something to my advantage. Have the birds eaten all your cherries this Summer, or have you eaten the birds?

Gardener's Wife (approaching).—Did I hear you say the birds ought to be killed, because they eat a little of our fruit?

The Men.—No, not exactly so; but then why shouldn't they be killed, if they do us harm, as well as the crows and rats and mice? Self-preservation is the first law of nature, you know.

Wife.—But then, the song-birds are so pretty, and so innocent, and sing so sweetly: why not let them take their pay in a few cherries and strawberries?

Men.—Ah, if they were innocent of stealing, or if they only took a little, and of such kinds as we could spare, the case would be different. Dear lady, make a difference here. Some birds steal, but are poor singers, and devour few insects. Others take our fruits, but try to balance accounts by keeping down the insects in our fields, orchards, and gardens. The first set may be shot down without compunction; the latter should be shot at—without shot!

Wife.—Glad to see some mercy in you naughty men; but you're a little cruel yet.

Men.—The birds are welcome to the seeds and fruits of all the weeds and briars and bushes that grow in the fields and woods; but when they come to plunder our garden fruits, which cost us so much money and labor, then they become our enemies; they are a nuisance as truly as the crows which pull up the corn in our fields, or the rats and mice who devour it in our barns. We will spare the robins just as long as possible, but when their plunderings become enormous, why then we must blaze away at them. Eh? lady.

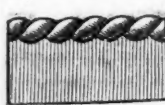
Wife.—I can't bear with you, and can't agree with you; it's barbarous to touch the robin-red-breast.

Men.—Good woman, we'll spare the birds who spare our fruits, as the swallow, blue-bird, martin, wren, and the whole tribe of sparrows; they are our best friends, devouring insects but not fruits.

Wife.—I came out to the gate, to invite you in to supper, but really, I don't want such cruel, bloody men at my table. Good bye.

Men.—Farewell, angel!

Gardener.—Before you go, John, look at this cut which I found in the "Gardener's Chronicle."



It is a proposed substitute for our grass, box and stone-crop, as a bordering for beds. It represents a section of earthen tile, which is much used in England for edging. It is certainly better than bricks set on edge; it can be made for about eight or ten cents a yard.

John.—Really, it strikes me favorably. I wish some of our brick or tile-makers would take this pattern and make some for our gardens. They would be popular.

Both.—Good bye.



For the American Agriculturist.

The Wren.

The American House-Wren, *Troglodytes fulvus* of Naturalists, is different in his migratory habits from the European Wren, which is a constant resident in his native regions, while our House Wren is never seen in the Middle and Northern States during the Winter season. It resides South in cold weather, and in Summer extends its migrations as far north as Labrador, where it also breeds, although it is said to reside and rear its young chiefly in the Middle States; but it is not uncommon in most parts of New-England, and, without doubt, its breeding places are not confined to high latitudes. It arrives with us in May, and returns south as early as the first of October, and as it rears two broods of young in one season, its song is prolonged to a late period in Summer—often to the middle or last of August. The nest of the Wren is built like that of the Blue-bird, in the crevice of an old wall, the hole of a bank or cliff, and in hollow trees; but if you take pains to provide a box or some similar accommodation, for it, the Wren can be very easily prevailed on to have its home within the inclosure thus made. The nest is oval shaped, with the entrance at the side, and is generally built of moss, with an inner lining of feathers.

The eggs are from six to eight in number, of a pure white color, sparsely dotted with light red. The Wren is an insectivorous bird; its food consisting chiefly of grubs, earth worms, all the insects which are the common food of birds of this class, together with elderberries and other pulpy wild fruits.

In England, the common Wren, and also the golden-crested Wren, are much admired as cage birds. The former, when confined, is lively and engaging; sings loudly, and nearly the whole season, though it seldom lives more than two years. It is not natural for them to be shut up; they enjoy too much the freedom of the woods, and the delightful air of heaven—what bird, indeed, does not!

Writers upon ornithology call this bird one of the most active and restless of the feathered tribe. He is always in motion, and even when singing is constantly flitting about and changing his position; seeming to be in all places at the same moment. His notes are very lively and garrulous, and are more noticeable at noon than any other hour of the day; because, says Mr. Flagg, the general silence that prevails at this hour, renders his voice more distinguishable than at other times. Of the song of the Wren, Mr. Flagg, (*Atlantic Monthly*, vol. II., page 593,) says: "He exhibits great compass and power of execution, but wants variety in his tones. He begins very sharp and shrill, like a grass-hopper, then suddenly falls to a series of low guttural notes, and ascends like the roll of a drum to another series of high notes rapidly trilled. He is not particular about the part of the song which he makes his closing note, but will leave off right in the middle of a strain, when he appears to be in the height of ecstasy, to pick up a spider or a fly."

The characteristics of the Wren—a cocked-up tail, and busy inquisitive look—are well shown by the sketch at the head of this article.

Brookdale Farm, N.Y.

S. L. B.

Don't forget the Evergreens.

At this season, when all nature is robed in her summer dress, we are apt to forget those trees which enliven the dreary months of the year. Look back a month or two, and all was bleak and brown, except as the evergreens made bright spots here and there. Look forward only a few months, and all will be bare and cheerless again, save where the steadfast conifers hold out and hold on to their verdure. Let us not forget these old stand-bys, these friends in adversity. Plant, if you choose, the gay, butterfly flowers; plant the deciduous trees, whose leaves begin to fade and drop almost as soon as they are fairly expanded; but by all means give large room and plenty of time and labor to the ever-during evergreens.

When a traveler, or visitor of rural tastes, stops at a country-place, he wishes to visit its gardens and ornamental grounds; but where there are no evergreens, there is very little to see, except in mid-summer. Let each proprietor of a house in the country, take pride in having on his place at least a few fine specimens of evergreens, and his home will be an object of interest to himself, his household, and his tasteful visitors, all the year round. He can say to his guests, come when they may, "Let us walk around and look at my noble Norway Spruces, my stately Pines, my graceful Hemlocks," and the guests will be as glad to look at them, as to examine a row of pear trees or grape-vines in summer.

Nor do we plead for them simply on account of their permanency, or their usefulness as

screens to break the force of winter winds: they are intrinsically beautiful and desirable. In symmetry of form, richness of color, variety in habit, and, as in the case of some of the pines, the hemlock, Deodar cedar, and some others, in gracefulness, they are hardly surpassed by any other trees.

But we are not strenuous to argue the matter now. Indeed, there is little need of it, for the love of evergreens is spreading almost as rapidly as the mania for grapes, though perhaps not altogether among the same classes. All we now desire to do, is to mention a few of the newer evergreens which are of superior beauty, and which promise to be hardy.

1. First of all, the Nootka Sound Cypress, *Thuopsis borealis*. It is described in Sargent's edition of Downing, as "a tall evergreen tree, reaching the height of one hundred feet, with widely expanded branches, very flexible; as it advances, the limbs are covered with small blisters, which, on being punctured, emit a fine aromatic balsam, whence is derived another synonym, *abies aromatica*. It is also found in Russia, near Lake Tschondskoe. It is yet but very new, even in England; but specimens have been out two winters, and are perfectly hardy, as it will probably prove to be in every northern part of the United States."

It stands the winter well at Newburgh, and at Boston. The place of its origin, Nootka Sound, would seem to settle the question of its robustness. We have embellished our own grounds with a specimen of it. Several of the leading nurserymen now advertise it for sale, at the rate of about a dollar per foot high.

2. Lawson's Cypress, (*Cupressus Lawsoniana*.) Of the entire hardiness of this tree north of New-York, we as yet stand a little in doubt, though it has done well for two or three winters at Fishkill Landing, N. Y., at Cincinnati, and at Cambridge, Mass. It resembles the *Thuopsis borealis* somewhat, but is a little denser in its habit, and a darker green. It has one beautiful trait of the Deodar cedar, hanging down the ends of its leading shoots like ostrich feathers. It was found in northern California and in Oregon. It grows a hundred feet high, and becomes one of the very finest of trees. We very much hope it will prove suitable for our northern climate.

3. Hovey's New Arbor Vitæ. This is a seedling from our native Arbor Vitæ, but as distinct as the Siberian or Chinese. It forms a pyramidal-shaped tree, densely branched, the leaves more delicate than those of its parent, and holding their bright green color throughout the winter. This last is of great importance. Of its hardiness there can be no question. The only doubt is, whether many persons will consent to pay five dollars a plant, which is the price now asked for it. But zealous amateurs will sometimes do very indiscreet things! Sober people will bide their time, and so get their trees cheaper.

4. Siberian Silver Fir, (*Picea pichia*.) Of this we have spoken formerly, and will now only say that it is one of the very finest and hardiest of the Silver Firs. Coming from Siberia, it ought to be as tough as a polar bear. It has a soft, full, luxuriant habit, which comforts one to look at. It is a medium-sized tree, seldom getting above thirty feet in height. We have personal knowledge of its succeeding well, north of Albany.

5. There are several other new conifers that promise well, but of which we cannot now speak with the utmost certainty. Among them is *Picea Nordmaniana*, one of the noblest of silver firs, from the mountains of the Crimea, and promising well as to hardiness. *Pinus Benthamiana* re-

sembles, but surpasses, the Austrian pine in beauty, and bids fair to rank among "the hardies." Frazer's Silver Fir must be suitable for all the northern States, since it has been found wild in northern Vermont. *Abies amabilis*, *A. Cephalonica*, *Picea pinsapo*, and several more, promise well. We intend to report upon them from time to time, as we feel assured of their excellence and hardiness.

P. S.—Since writing the foregoing, we have met in Hovey's Magazine, with a report on some of the newer evergreens, from Mr. Harris, gardener on the Hunnewell estate, near Boston. It is in substance as follows: *Pinus Lambertiana*, and *P. Bartsleyi* unharmed by the frosts of last winter; *Picea Nordmaniana*, and *P. pinsapo* ditto; *Abies Smithiana*, and *A. nobilis*, ditto. *Thuopsis borealis*, and *Cephalotaxus Fortunei*, ditto. The Wellingtonia, or Big-Tree of California, and the Deodar cedar but slightly injured.

We should be glad to learn whether these trees were covered by snow, or protected by straw or matting. If not, we are surprised at the reported hardiness of some of them.



Native Evergreens.

Some of the evergreens now bought at the nurseries, are supposed by many to be of foreign origin. For instance, the Norway Pine is not from Norway alone, but may be found growing wild in this State. It is *Pinus monticola* of the books.

The common Juniper, (*Juniperus communis*) is often supposed to be imported from England and Sweden; but it grows wild in central and southern New-York, and Pennsylvania, and elsewhere. It is none the less desirable on this account. It takes different forms. Sometimes it is upright and compact like a miniature Lombardy poplar; again, it is more open and spreading, looking when full grown, like an ill-built hay-stack; again, it is straggling and drooping, its foliage hanging down almost perpendicularly from its horizontal

branches. The first style is most admired. And we will here say that most junipers can be trained into this shape by passing a cord spirally around the branches wherever they show a tendency to spread. We annex a cut of a fine, well trained specimen standing on our own grounds. The Swedish juniper, we think, takes this form more naturally than any other.

The Savin (*Juniperus Sabina*) is a native, though some species are imported. It forms a dense spreading thicket. Travelers on the N. Y. Central Railroad may see it on the hill-sides near Little Falls. It also abounds at Niagara. It may be made quite ornamental.

The Cembran Pine (*Pinus Cembra*.)

This is one of the newer evergreens, perfectly hardy, and very desirable. We have observed it for several years in the latitude of Albany, growing by the side of the native white pine, and it has proved equally robust. It has not yet been extensively planted, but may be found in most of our nurseries, and at a reasonable price. It is a native of Switzerland, Savoy, and Piedmont, where it grows on the coldest mountains, and of Tartary and Siberia. In Europe, it is sometimes styled the Aphernousli-pine, from two German words, signifying a nut-pine. The kernels of its cones are edible, and in this respect it resembles the famous Italian Stone-pine. All travelers through Northern Europe speak of its grand and majestic appearance, crowning the ridges of the mountains.

Speaking of this tree, Harte, in his Essays, observes: "Its timber is large, and has many uses within doors; its grain is finer and more beautifully variegated than deal, and the smell is more agreeable: it is useful for wainscoting, flooring, and other joiner's work, and the wood makes excellent firing for stoves and ovens. The peasants of Tyrol, where this tree abounds, make various kinds of carved work with it, which they dispose of in Switzerland among the people, who are fond of the resinous smell which it exhales. The bark of the trunk is of a whitish cast, and the branches resemble those of the Spruce-fir. They are long, slender, and are produced by fives."

The only objection which can be made to this tree, is its comparatively slow growth—as to its appearance, there can be only one opinion. A writer in the English Gardener's Chronicle lately, says, speaking of a fine specimen in the pleasure-grounds at Osberton-Hall; "The *Pinus Cembra* is nearly fifty feet high, and the branches, at twenty feet from the ground, spread sixty feet in circumference, and the trunk, at the bottom, girths eight feet. Few of the *Pinus* tribe are more beautiful than this; its handsome conical shape, and short, rigid horizontal branches, combined with its color, render it particularly attractive. It certainly deserves more extensive cultivation than it has received, for, planted as a single specimen, it is really magnificent."

Mr. Sargent says there are two varieties. One, the Siberian Stone-pine, with short, dense, and dark green leaves; the other, the Dwarf Cembran pine, found among the rocks of the Ural mountains. The true Cembran pine grows fifty or more feet high, though it takes many years to reach that altitude. It makes always a very pretty, compact, soft-green tree, and is very desirable.

THE WEEPING HOLLY.—Wherever the common English holly will thrive, this novelty may be expected to succeed. South of New-York we think, will be its best region in this country.

How to Pick Strawberries.

A child knows how to pull off the ripe berries, but if you will examine, you will find one, two, or three unripe or green ones, gathered by careless or unskillful picking, accompanying each ripe one into the basket. This fruit grows in bunches upon a common fruit stalk, and there is a great difference with different varieties, in the habit of parting easily at the joints. The Walker's Seedling, one of the richest flavored berries grown, and a very good bearer, is seriously injured by this tenderness at the joints. Unless the greatest care is exercised, you get more green than ripe fruit at picking.

As this work is generally done, the berry is pulled from the stalk, causing it to part at the weakest point, which is sometimes below the whole bunch of fruit in which there is but a single ripe berry. In consequence of careless picking,

less than half a crop is realized; for the plant has no power to send out new fruit stalks, and repair the waste before another season.



In the proper mode of picking, the berry is not pulled from the stalk. It is taken between the thumb and fore finger, and the thumb nail is brought

down upon the ball of the fore finger, cutting the stem as near the fruit as possible, as seen in the figure. The thumb nail of the strawberry picker should be left long for this purpose. The stem is made fast between the end of the nail and the finger, and where the stem is not immediately cut, it is forced off by a gentle contraction of the thumb and finger. This leaves the rest of the bunch to ripen. These directions apply to fruit picked with the hulls left on, which is the way generally adopted with the finer kinds.

Much of the profit of strawberry culture will be found to depend upon careful picking. It is easy to waste fifty bushels to the acre in destroying green fruit. If children are employed in this business, they should be carefully instructed in the best mode of picking.

Thinning out Plants.

We hereby repeat our annual advice on this subject. Most gardeners are apt to let their vegetables and flowering plants grow too close together. They sow an extra amount of seed, in order to guard against contingencies, and when the plants shoot up vigorous and handsome, it is quite hard to pull them up and cast them away like weeds. But this must be done, if we wish for the best results.

Cucumbers, melons, and squashes, should be thinned out to three vigorous plants in a hill; pole beans to not more than four. Beets, onions, carrots, parsneps and the like, should be repeatedly thinned, until they stand far enough asunder to allow the full development of root and leaf. Let this be done, too, in good season, or the plants will be drawn up spindling, running to leaves more than to roots. A beet, or ruta-baga, without a good root, isn't worth much for its leaves.

So with flowering plants. Nearly all gardens suggest the idea of a jungle. Most persons seem ambitious to get as many plants into a given space as it can hold, forgetting that a small number well selected, well developed, and trained, give greater satisfaction. Let the annual plants

now coming forward, be subjected to a faithful thinning out, and the advantage will soon be apparent.



Inexpensive Household Ornaments....IV.

SPECIMENS OF BIRDS.

In the October No. of last year's *Agriculturist*, page 333, we gave an illustration of the "White Breasted Nuthatch," (Sap-Sucker,) drawn from a beautiful specimen prepared in a manner new to us, and forwarded by Mr. John Marsden, Oneida Co., N. Y. In answer to our request, he has kindly furnished minute directions for the process of preparation. It is much less difficult than the ordinary way of skinning and stuffing, and a very life-like representation of the bird is produced. The feathers only are used—it is, as Mr. M. calls it, a method of painting a bird with his own plumage." Specimens of this kind arranged in glass cases, or frames, are beautiful ornaments for the parlor. The materials required, are a bird, a sharp pen-knife, and scissors, a smooth pine board about twelve inches square, black lead, and camel's hair pencils, a box of water color paints, drawing paper, and a smooth paste. This is made by dissolving a teaspoonful of gum arabic in a teacup of boiling water, add flour batter till the paste is thick, and boil well. In commencing the work, we must first obtain a correct life size outline of the bird to be represented.

As each bird has some peculiarity of shape, it is best for those unskilled in drawing from nature, to copy the outlines from some illustrated work on Ornithology, which can be done very neatly upon thin oiled paper laid over the engraving. But as these pictures are very seldom of the natural size, it is necessary to enlarge them, which may be done thus: Take an outline of the print on oiled paper with a lead pencil, mark out the outlines of the wings and eyes, also the divisions of the different colored plumage, if you think it necessary. Then, rule marks across your outline, with a fine lead pencil, from top to bottom, and from side to side, one-quarter of an inch apart. Measure your bird by the print: if, for example, it be twice as large, take a piece of drawing paper, two inches larger every way than the bird, rule it with the same number of squares as are on the oiled paper, but make them twice as large, or half an inch square. So if the bird be one half, or one third, or any number of times larger than your outline copy, make the squares on the drawing paper larger in this same proportion. Then draw the small outline, square by square, into the large squares, observing to make the part of the outline you draw, fall in the same part of the large squares, that it does in the small ones. When

the outline is finished, paste the paper down by the corners to the working board. The parallel pencil lines will do no harm, as the outline will be covered with feathers, except the bill and feet, which must be painted.

The figure shows a half life-size outline of the Carolina Chatterer, (*Bombycilla Carolinensis*), known by the names of Cedar bird, Cherry bird, Wax wing, etc. This bird is very common in the Atlantic States, and one of the very best to feather. This may be copied, and it will be a very good subject for the first attempt—as he is a sad thief in cherry time, we shall have less compunction in shooting him. Work up your paste fine, adding water if necessary, and with a camel's hair pencil, lay on a light coat of paste where the feather, 1, is to be laid. Pull out the outermost left tail feather, lay it on your board, cut off the quill, and lay it in its place at 1. Next, pull out the outermost right tail feather, cut off the quill, and paste it in its place at 2; lay a little paste on the innermost web of 2, then take the next outermost right tail feather, and paste it in its place as at 3; paste 4 the same as 3; then fill up the left of the tail, as you have done the right. Place the center feather last, which completes the tail. Generally, the quill end, or the base of the tail feathers, must have their shafts lie close together, but not crossing each other. Now, take a narrow strip of thin unsized paper, and paste it over the quill end of the tail, which will keep the feathers in place, after which, lay on a light weight, and let it dry.

Next in order come the "tail coverts." They are not shown in the outline, but by looking at your bird, you will see that they commence with a point half way down the tail, opposite 11, and extend upward, spreading out and filling the space, 10. Pull out the lowest feathers first, cut off the downy end, and use the tips only. Lay on a little paste, take up a feather with your wet brush, by laying it on the feather close to the cut end, and attach it in its place. Paste in this manner a row of feathers, then add a little paste, and put on another row overlapping the first like shingles on a roof—work this color of feathers up through the space 10, and under part of the wing, which must cover them.

Next pull out the longest right wing primary, cut off one inch of the quill end, and paste it down at 5, as you did the first tail feather. Paste the rest of the primaries in the order shown in the outline, by cutting the second shorter than the first, the last one only about an inch long. The feather ends of a folded wing lie close together, one overlying another, so that the outer web and tips only can be seen. Paste a strip of thin paper over the quill end, as you did on the tail: generally, all large feathers must be secured in this way; and if the bird is large, the shafts must be pared thin on the under side with a sharp knife. Having proceeded so far with your wing, lay on a light weight, and let it dry. Now, pull out the secondaries (the wax-tipped feathers, 6,) commence to paste them down on the outside of the wing, overlapping each other towards the back, and the tips overlapping part of the primaries. Next put on the small "bastard" feathers, 7; then the wing coverts, 8, on the outside, overlapping each other towards the back, and the tips overlapping the "bastard" and secondaries; and then the back feathers, 9. Commence next at the tail, and put on all the under feathers, 12, 13, each feather in its own place, till you come to the head. The shaded parts around the head and throat are intended for the black feathers. All the small feathers must be put on very full, as much of the beauty of the specimen depends on

this; cut all the down from each feather, take them up with the wet brush, being careful to let the paste touch only a small portion of the cut end.

Having finished the feathering, draw and paint the eye in its natural color, on a separate piece of paper, cut it out, and paste it in the right place on the top of the feathers. Paint the bill and feet, shading with black ink. If the eye is dark, on a dark ground, it is best to leave a white circle round it, otherwise it would not show well.

When the specimen is dry, cut it out with a sharp penknife, leaving no paper around it except the bill, legs, and feet. Turn it over, dampen the back of the paper a little with water, place it between the leaves of a book, and lay on a heavy weight to press it for a day or two, which will take out the wrinkles caused by the wet paste.

The best way to preserve these specimens, is in a frame with a glass, like a common picture. Take a sheet of thick drawing or chart paper, the size of the frame and glass, paste on a sufficient number of specimens, being careful to paste only the bill and legs, and a few touches on the body, just enough to keep them in place, or the wet paste will wrinkle the paper and spoil it. Fill out the picture with a landscape, trees, etc. Each specimen which requires it, should be perched upon a branch. Number each specimen, and record the number in a catalogue, where its name and habits may also be written. In this way some knowledge of ornithology, and a taste for natural history, will be acquired, as well as a handsome household ornament.

Look out for Moths.

There is scarcely a more provoking pest of the household than the moth. His depredations are carried on so quietly, that very often his existence is not suspected until upon bringing out the best dresses, or expensive furs, which had been laid away in supposed safety, they are found ruined. Great sympathy is sometimes felt for the poor little "miller" that flutters around the candle, scorches his wings—and dies, a warning to the venturesome—but little pity would be wasted on him were it known that this "miller's" children will, if unmolested, make a grist of our carpets, coats, furs, and whatever else may suit his extravagant taste.

There are several species of these insects, differing in size, form and habits. Some attack woolen cloths of every description; others confine themselves mostly to carpets, and others again are satisfied with nothing but furs. They are mostly known by the name *Tineæ*; the clothes moth, is *T. vestimentalis*; the fur moth, *T. pellionella*. In the winged state, they have four short and slender feelers, a thick tuft on the forehead, and very narrow wings deeply fringed. They are busy in May and June laying their eggs where the young may find their proper food, and when they have thus done their share of the mischief, they die. In about fifteen days, the eggs hatch, and the little whitish, sharp-toothed caterpillars or moth worms begin their nefarious operations. They furnish themselves with food, clothes, and lodgings, from the fabrics they destroy; gnawing the substance, and rolling up the fragments into small tubes with open ends, where they keep as snugly ensconced as a turtle in its shell. Like the turtle, some of them carry their coverings around with them. As they grow, they enlarge their garments at each end, occasionally setting in a piece at the sides when necessary. Thus they pass the Summer; then take a Winter nap; change to chrysalids in Spring, and in about twenty days, emerge as perfect insects, to

flutter about, find their mates, and raise another enterprising family. Now is the time to rout them out. Take all furs and woolen clothes from drawers, clothes presses, etc., and with a light cane give them a thorough beating, to dislodge the eggs, and expel the dust in which they delight to hide their progeny. Gum camphor in coarse powder, plentifully sprinkled among clothing, and the drawers and boxes containing it, will sometimes prevent their return. Housekeepers sometimes find the moth, notwithstanding this or some other strong aromatic had been applied liberally, because they had not first beaten or shaken out the intruders already in their quarters. Empty cigar boxes are among the very best receptacles for articles subject to moths—they have sense enough to eschew tobacco. Ground black pepper sprinkled upon the floor is useful to keep them from carpets; they should, however, be thoroughly beaten twice a year. It is also well to give furs a beating once or twice during the Summer, to make sure work.

For the American Agriculturist.

The Rocking Chair.

There is much comfort, and not a little philosophy in the rocking chair. Its inviting arms and soothing motion are grateful to the weary, and age never looks more becoming than when placidly enjoying the repose they afford. The picture of a household is incomplete without the grandmother, with her knitting needles for a scepter, smiling benignantly from this domestic throne to which her years entitle her. The weary mother quieting her fretful child, knows how to prize its aid, and the invalid finds both exercise and rest in the gentle swaying.

Some would banish the rocking chair as a useless and enervating luxury. But rest is not enervating—the sooner one can recover from fatigue, the better for the muscles. Over-exertion, insufficient rest, or total inaction, these weaken. If a person is content to make a business of rocking away the hours that should be actively employed, this without doubt will enervate, but even this would not be more hurtful than to sit listless upon a hard bench—rather, less so, for rocking calls the muscles slightly into action. For this reason, it is favorable to recovery from fatigue. A cord tightly strained and suddenly loosened, recoils with a sudden snap, but yields without violence if gradually relaxed; so, when the bodily energies have been greatly taxed, and kept up to high tension, the gentle "easing down" given by the rockers, restores the equilibrium gradually and agreeably. The mind is employed and diverted, but not taxed by the constant change of position, and the gentle wings of forgetfulness imperceptibly winnow away the clouds of care.

In selecting a rocker, choose one fitted to support the person in its natural shape. Too many patterns compel one to sit with shoulders drooped forward, chest sunk in, and the back brought to an ungraceful and injurious curve. The lungs should be allowed free play, whether we rest or work; they will aid in resting by vitalizing the blood, while a cramped posture will of itself cause fatigue. The materials of which rockers or other chairs are made, will depend upon the taste or purse of the purchaser. Spring seated, hair-cloth furniture is much in use for the parlor, and is comfortable, and durable when of good material. For use in Summer, cane seated chairs are preferable. The longer the rockers, the greater will be the sweep of the motion, but where they project far, they are much in the way, and constant-

ly liable to disfigure the base boards, or sides of the room. It is better to assign them a place distant from the walls; and where a chair is much used, an extra thickness of carpet or oil cloth is needed to prevent wearing unsightly places.

Kings Co., N. Y.

M. E. H.

How to Make Ice Cream.

This popular luxury will soon be in season, and may be enjoyed to perfection by our rural readers, who know what cream is, and who can readily obtain it. Here in the city, we get various substitutes for the genuine article, the best being made of milk and eggs, but much of that sold at the saloons is a compound of corn starch, arrow root, and in some cases of ingredients known only to the makers. The readers of the *Agriculturist* will thank our kind contributor, Mr. J. Crozer, Mercer Co., N. J., for the following recipes and directions.

VANILLA ICE CREAM.—Take about one large vanilla bean to 3 quarts of pure cream. Split the bean; scrape the seeds into a cup; cut up the rest of the bean in fine pieces, and put with the seeds; add a little water, and let it steep for awhile over a fire; when done, and cool, add it to the cream. Add also, $\frac{1}{2}$ lb. of fine white sugar for each quart of cream. When the sugar is dissolved, run the whole through a strainer into the can or freezer.

LEMON CREAM.—For 5 quarts of cream (equal to 9 qts. when frozen). Take 2 $\frac{1}{2}$ pounds sugar, and about 3 lemons. Grate the outside of the lemons, and rub the gratings fine, with about 1 oz. sugar, then squeeze on to them the juice of two of the lemons, add a little more sugar, then mix with the cream. The cream should be sweetened before the lemon is added. Then strain into the freezer, and freeze.

STRAWBERRY CREAM.—Use $\frac{1}{2}$ pound sugar for each quart of cream, and strawberry juice for flavoring. The berries are squeezed through a piece of muslin, or a strainer, and an additional $\frac{1}{2}$ pound of sugar is allowed for each pint of juice. Use only enough juice to give the cream a slight violet color. Confectioners add prepared cochineal, to lighten the color; still more juice can be added if desired. Place it in the freezer, etc., as for the others.

PINE APPLE CREAM.—Cut off the outside of a large ripe pine apple; cut up the rest in fine pieces in a pan, and cover it with sugar; or make alternate layers of the apple and sugar, and let it stand several hours; when wanted, squeeze it all through a strainer, and use sufficient to flavor—one apple to about 6 quarts cream. Allow, also, $\frac{1}{2}$ pound sugar to each quart of the cream; and it is ready for freezing.

ALMOND CREAM.—Take $\frac{1}{2}$ pound sugar for each quart of cream; and about 1 ounce of bitter almonds (which should be blanched) fine, in a mortar, or bowl, with rose-water. They should be prepared only as wanted, as they soon spoil. When fine, add them to the cream, etc.

The above are the principal kinds of "cream," usually prepared by the Confectioners. It is easy to see what a great variety can be made by changing the flavoring, which should never be in excess, but just perceptible to the taste. Those who use eggs and milk, may find the following directions to answer.

Take 3 quarts milk; 2 pounds fine white sugar and 15 eggs. Put the sugar in the milk, and set it on the fire, keep stirring until it just begins to boil, then take it from the fire and pour into it the eggs (which in the meantime have been well

beaten). Stir the milk well while pouring in the eggs. Then set it on the fire again and let it just *boil*, when it is immediately poured through a strainer to remove all lumps. When cool, put it in the freezer, and proceed the same as for pure creams.

Another.—4 qts. milk; 2 lbs. sugar; 10 eggs. To be mixed same as the first. The flavoring may be added to the milk, or, if extracts are used, add them to the milk when strained into the freezer.

FREEZING THE MIXTURE.—To do this well, requires a few trials, but is soon learned. The apparatus described in our last Vol. page 215, (July No.) facilitates the work, but for making a small quantity for occasional home use, a tin pail, a pail or tub large enough to receive it and the ice and salt around it, with a paddle like a pudding stick to stir and beat the cream, are sufficient.

The freezing mixture is made of one lb. of coarse salt to 3 lbs. ice pounded as fine as peas, well mingled together. Place a thick lump of ice in the bottom of the tub, set the can or pail containing the cream upon it, and fill the tub to near the top with the ice and salt. Pour in the cream, put on the cover and whirl the kettle around by the handle, first one way, then the other, until it begins to freeze pretty freely at the sides. Then take the "heater" and handle it so that with each stroke the frozen cream is scraped down from the sides of the can; this brings fresh portions of the cream in contact with the freezing surface, and ensures a uniform congelation. The beating is also necessary to impart "lightness" to the cream, by forcing in air. Pure cream, properly frozen, is very soft, smooth, and light to the taste—if not properly done, it will seem coarse and contain frozen particles. The more milk that may be added to cream, the more difficulty in beating it light; for milk, or even eggs and milk, will not catch and retain the air like pure cream; neither will it taste so soft and smooth.

If the cream freeze very rapidly to the side, indicating the use of too much salt, raise the can out of the tub for a few minutes, but continue to use the beater. As a general rule, a can half-full of pure cream, should be beaten until it is very nearly full, or double in quantity; the freezing going on at the same time.

When the beater is taken out, scrape it off lightly, so that none of the greasy, soapy substance which may have collected upon it, will get into the cream—as it would spoil the flavor and quality. When the cream is finished, draw off a part, or all of the water in the tub, and place around the can more ice, in larger pieces and with less proportion of salt. If the cream is not to be used for some hours, immerse the can in the ice and salt, and lay a cloth over the tub. These directions are to be observed in making all kinds of ice creams; during the whole process great care must be taken to keep any salt or salt water from the cream, as this would ruin the flavor.

Recipes.

To SETTLE COFFEE.—J. Armstrong, Columbia Co., Wis., recommends the following method: Brown the coffee in the usual manner, and when nearly cool, break an egg upon it, and stir it well, to have each kernel coated. The coffee should not be warm enough to cook the egg. Use one egg to a pound of coffee; let it dry well before grinding. When boiled for use, it will settle without further trouble.

PORK APPLE PIE, contributed by "L." Line
a deep plate with pie crust, pare and slice apples
enough to nearly fill it, sweeten and spice to the

taste. Cut slices of salt pork very thin ; lay them over the apple, and cover with the top crust. Bake two hours. [Rather greasy to digest well.]

Mrs. E. Gilbert, Lenawee Co., Mich., contributes the following three:

CHEAP SPONGE CAKE.—One cup white sugar, two tablespoonfuls butter, one cup sweet milk, 1 teaspoonful cream tartar, $\frac{1}{2}$ teaspoonful soda. A little less than a pint of flour, 1 egg, and nutmeg to taste.

Cookies.—One cup butter, two cups sugar, one cup sweet milk, half teaspoonful soda, nutmeg or caraway, for spice; mix with flour until quite stiff, roll thin and bake quick. These I think superior to those made with eggs. They improve with age if kept in a covered stone jar.

A GOOD PLAIN GINGERBREAD.—One coffee cup thick cream, one cup molasses, one teaspoonful soda, ginger to taste, a salt spoonful of salt. Stir quite thick with flour, and bake in square tins.

To Keep Hams in Summer.—Contributed to the *Agriculturist*. Cut in slices and trim off the rind and outside; fry it about half as much as you would for the table. Pack it tightly in jars; pour over it the fat that fries out, and enough lard to cover it; close the jar tight, set in a cool place, and it will keep fresh all Summer.

BREAD CAKE.—To one cup of light bread sponge, add one egg, one cup of flour, half a cup of butter, half a teaspoonful of saleratus, spice to your taste; stir well together, and put immediately in the oven: bake as for bread.

BAKED INDIAN PUDDING—Contributed to the *Agriculturist* by Mrs. L. Bright, Isabel Co., Mich. Scald ten tablespoonfuls of Indian meal in three pints of sweet milk: add an ounce of butter, and sugar or molasses to sweeten to the taste. Bake two or three hours.

The Editor with his Young Readers.

ANSWERS TO PROBLEMS.

No. 13. *Illustrated Rebus.* A man can knot purse-up the road two-on-R f-aim and well-th withe-on t-in-duster y per-sen-V ear-ants and kn-owl-edge.—This properly



straightened out, reads "A man can not pursue the road to honor, fame, and wealth, without industry, perseverance and knowledge." Translated correctly by Anna M. Pettinger, "A Reader," Wm. H. Simmons, D. H. Du Bois, H. H. Witmer, J. L. McCreary, Flora and Stryia McGintock, John H. Young, A. E. Smith, Elroy M. Avery, I. Howard Corning, P. P. Halladay, Mrs. F. R. Wildbain, Robt. Forsyth, Fitch A. Rockwell, Joseph Flowers, Charles Flowers, Wm. Bradshaw, S. Henry Hickock, E. C. Clairborne, Henrietta V. Gern, Maggie A. Walker, Mary E. Schoonmaker, A. J. B. George P.

Armer, J. D. Baldwin, Howard Adams, J. McKinnin,
Turner, and Edward C. Hinman.

No. 14. *Anagrams.*

I've no tax, transposed reads Vexation.
Rural grist I cut, " Agriculturist.
No lies etc., " Elections.
Ah! of sin, " Fashion.

Answered correctly by A. E. Smith, Robert Forsyth, Mary E. Schoonmaker, A. J. B., and Robert C. Hinman. (This lad sent us a *model letter*, telling his story in few words, giving answers to all the problems, and better still, giving his mother credit for helping him.—We shall be pleased to hear from him again, as well as from all our other girls and boys.)

No. 10. *Aunt Sue's Rebus.* The picture reads "H in well
found-ed is H-arm in g feet-ewer;" which pronounced



quickly, with the right emphasis gives the answer, "A chin well rounded, is a charming feature."

Read correctly by Mary L. Bartley, Samuel F. Rath-
von, Angell Matthewson, A. E. Smith, Edward C. Hin-
man, and Carrie T. Warner.



on, until the nine kernels are placed. Solved by E. P. Nichols, Edward H. Burd, A. E. Smith, Elroy M. Avery, and Edward C. Hinman.

No. 12. *Labyrinth*. Additional answers received from G. L. Emery, Edward C. Hinman, Gilbert Spicer, W. A. Buckhout, Silas Bice, Fitch A. Rockwell, Dottie Noble, F. E. Halladay, and Robert Mowbray.

NEW PROBLEMS.

No. 16. *The Accountant's Puzzle.*

A Farmer was much puzzled upon receiving the following bill from an illiterate mechanic. The amount, \$7 was correct, but the difficulty is to find how it was obtained. Please make it clear.

	John Spouter,	To C. Speedy,	Dr.
To 2 Iron Plows, @ \$7.....			\$14
1 Wooden do.....			7
1 Wood do.....			7
			\$28

No. 17. Anagrams. The transpositions of several of the following are quite comical.

Flit on cheering angel.	Spare him not.
A nice cold pie.	Moon starers.
Comic trade.	Golden land.
Nay I repent it.	Nine thumps.

HAVE YOU SEEN A SKY LABR?

This sweet singing bird is a native of England, where he is a universal favorite. He is about the size of a reed-bird or bobolink. He somewhat resembles the female of that species, except that the breast is yellow, and more spotted. You may recognize him by the fact that he never alights upon a tree, but always on the ground; his foot is so formed that he can not clasp a branch. His manner of singing, too, is peculiar. Early in the morning he springs from the ground, commences his song, circles round and round, winding his way up to a great height, singing as he goes, sometimes passing quite out of sight. He continues his flight and his song from five to fifteen minutes, descending as he rises in a spiral line, until when from one hundred to twenty feet high, he closes his wings, shoots down almost like a bullet, until near the ground, then spreads his wings to arrest his motion, and alights.

Seven years since a gentleman procured seventy five of these birds from England and liberated them in New-Castle County, Delaware, in the hope that they might propagate and become naturalized in this country. A year after, he heard of a colony of them not very distant from his residence, where they spent the Summer and delighted the residents with their music. Since then he has heard but little reliable concerning them, but believes

they have multiplied and spread over a large extent of territory. He would like to know more about them. Have any of our young readers recognized these welcome strangers? If so we should like to hear from them.

ABOUT THE PICTURE—THE NEW FASHIONED BONNET.

Sure enough, "What is it? Man, or Monkey, or both?" What could have put it into the heads of those creatures in the picture to put such things on their heads, to assume such fantastic airs, and to appear so ridiculous generally. You may be ready to ask "Do people ever make such fools of themselves as the picture represents?" Our artist took the sketch in a street in this city. We are not sure but he has stretched it just a little, for he has a very comical turn of mind, and is apt to see things in a ludicrous light. Yet there is truth as well as humor in the drawing. These persons are fair samples of the extra "fashionables." They make dress and display, the business of life. Fashion is their god, and the dress-maker, the milliner and the tailor are the high priests whose instructions they follow. They would not dare think for themselves what style of clothing would be appropriate and becoming, and it would seem sometimes, that the tailors, dress-makers, etc., take pleasure in inventing the most absurd shapes for garments, on purpose to make these fashionables appear ridiculous. At one time the bonnet must be like a little butterfly stuck on the back of the head, good for nothing as a protection, and only serviceable to the milliner who sells it, and to the physician who is called to cure the colds taken by such exposure of the face and head. But the fashion changes, and now the shape of the fashionable lady's hat resembles a coal scuttle in front, a scoop shovel behind, with flowers as big as apples thrown in to fill up the vacant spaces. The male fashionables just now bestow their principal thought on the beard; and we have that appendage tortured and twisted into every conceivable shape, until a full blown dandy might safely pass for a baboon—no one would suspect him of being a man.

You can readily see that these gentry are a useless class. The female in the picture can pet her poodle dog, but she would count it a disgrace to appear in the streets with a babe in her arms—well, she is better fitted to care for a puppy than for a child. The exquisites of the other gender, can swing a cane, but not a flail, they can "cut a swath" in Broadway, but not in the meadow. The ragged little street sweeper is doing more real good in the world, than the whole tribe of these "nobodies." These useless, vain and silly creatures were once promising young people. But they were educated to nothing useful, and you see the result; they are a laughing stock for you and for all sensible persons.

TALK ABOUT SWIMMING.

Can you swim? Or rather, we should ask have you learned this art? for all can swim; it only requires practice to prove their ability. It has often surprised you, perhaps, to see how easily animals swim. A dog or a cat thrown into the water for the first time, finds no difficulty in paddling straight to the shore; why is it so hard for a boy to do the same? Partly because the motions required, are different from those we make when walking. Animals you know, use their limbs almost in the same manner in the water as when on land. It requires also a little practice to overcome the difficulty of breathing which immersion causes, and moreover, the sensations are at first so strange, a person loses presence of mind, and is unable to control his motions. Among savage nations, especially such as live near the water, as on the Islands of the Pacific, children take to swimming as naturally as to walking. We have seen in this city, boys of eight years old, expert swimmers, who would dive fearlessly into deep water, and frolic about with all the confidence of a frog. In addition to the health and pleasure of a bath during the witting heats of Summer, the swimmer is possessed of an invaluable resource in many times of peril. To save a single life would amply repay the trouble of learning to swim, if it were a trouble instead of a pleasure.

Let us give a few cautions and suggestions that may be of service in the learner's first attempts; we take it for

granted all our young readers would like to possess this manly accomplishment.

CAUTIONS.

Never bathe immediately after eating. The stomach needs a regular supply of blood when digesting food; but a plunge into water disturbs the circulation of the blood, and stops digestion. Severe illness has followed neglect of this rule. Do not undress and then sit awhile to cool before entering the water; rather plunge in at once than

enable him to rest at any time when fatigued, and also to sustain himself until help arrives, if attacked with cramp. Let him choose a still, unruffled place not far from shore. throw the head back so that the face looks upward and the nose is the highest point cut of the water, throw the feet forward, and stretch his arms out at full length beyond the head on the surface. The toes, the face and the ends of the fingers will then be in a line above the water, and he may with very little care lie there as comfortably as upon a bed. In this position, the lungs filled with air, are

near the center of gravity, the head and arms balance the legs, and the body floats as easily as a plank would do. If a person when in deep water will gently throw the head far back, so as to elevate the face, and bring the whole back part of the head under water, and keep the arms folded, or by the sides, he will hang suspended perpendicularly with his nose safe in the air; it will require several trials to keep either of the positions just described, as any struggle will throw the head down.

To swim on the back, head first, you may use either the hands, or feet, or both, for paddles. When floating on the back, bring the arms around toward the sides with a sweep slightly downward, and at the same time bend the knees and push vigorously with the feet, and it will give a motion backward and a little upward—enough to enable you to throw the arms back again over the head for another stroke, without submerging the face. Or you may extend the feet, bring the arms near the sides, draw the hands back by bending the elbows downward, letting the hands pass edgewise through the water, then turn the palms

and push toward the feet. Some swimmers place the hands against the sides, and send themselves back ward by bending the knees, and thrusting the feet forward rapidly against the water. Swimming on the back, feet foremost, is easily done by carrying the hands palms outward, with a sweep from the sides, until they are at right angles with the shoulder, then returning them edgewise through the water to the sides again, and repeating the strokes in the same manner.

We have not space to describe and give directions for the many evolutions and feats that may be performed by an expert swimmer. These are better learned by imitating one already at home in the water—it will be enough for all practical purposes if you learn to make your way through the water well, and to rescue a drowning person if occasion require.

THE WONDERFUL PLANT.

We were much amused with the following anecdote, the substance of which was published in a New York paper recently. There are attached to the Capitol grounds at Washington, gardens, conservatories and hot-houses, under the care of a gardener appointed by the President. The man holding this situation was an enthusiastic and accomplished botanist, and prided himself not a little on his science. One of his friends was one day boasting of his acquisitions, when Mike Walsh, a Member of Congress, determined to play off a joke which should prove that the gardener did not, at least, know every thing. He accordingly prepared a flower pot, inserted in it what appeared to be a very singular plant, which was neatly tied up to a stick, and carrying it to the gardener, led him to believe it had just been brought from Japan by a Lieutenant in the Navy, and requested him to name it. The gardener inspected it closely, examined his botanical works, pronounced it a species of Cactus, and gave it a high sounding Greek title; he also, after much entreaty, persuaded Mike to leave it with him, to be cultivated in the hot-house. It was cautiously sprinkled with warm water, placed under a bell glass, and watched with great solicitude. In a few days, its appearance changed considerably, and the delighted gardener exhibited it to all visitors, declaring that it was about to send out buds and blossoms. But after waiting a little longer, a most unpleasant odor was perceived arising from it, and the gardener began to "smell a rat." He took off the bell glass, removed the soil around the roots and found that the joker had planted a large rat in the pot, leaving the tail sticking up for him to name and cultivate! He did not succeed in raising any vegetable rats, and his scientific pride was somewhat taken down.



A SCENE FROM FASHIONABLE LIFE.

do this, but it is safer to wait until perspiration is partially checked, before removing the clothes. Choose the morning for bathing, and avoid the water, for swimming at least, when much fatigued—a wash in moderately warm water will do no harm. Select a perfectly safe place, where there are no sudden descents to deep water, for learning to swim; and after learning the art, venture beyond your depth no further than where you feel perfect confidence—a swimmer is in danger the moment he fears. Never be tempted to foolish or venturesome exploits by a desire of exhibiting your courage or skill. It is braver to resist a taunt or sneer, than to allow them to lead you into danger. If possible, accompany good swimmers in your first lessons, they can show you more than any description can teach, and also to aid you if in danger.

HOW TO SWIM.

We will suppose you standing on the bank of a stream ready for first essay. Enter the water boldly, and at once wet the whole body, head and all with a good *souse*. If you stand long shivering and dreading, your courage will rapidly cool off. Now wade out to where the water is breast high, and turn and face the shore. Lean forward enough to bring the breast upon the water, throw the head back so that the chin rests on the surface, place the hands palm to palm, the fingers and thumbs closed together. Then spring forward from the ground, at the same time thrusting the arms forward as far as possible; then deliberately sweep each arm around backwards and a little downward until they are at right angles with the body, remembering to turn the palms of the hand outward to press against the water. Bring the hands together for another stroke, at the same time gather the legs up, for a kick outward and backward, and push ahead by repeating these motions. Keep yourself as near as possible in a horizontal position; beginners usually allow the legs to sink too far down. Observe a frog when he swims, he is a model in this line. Try from the first to make these efforts deliberately, and not with a convulsive jerk, which would soon tire you out. Never mind a little ducking and strangling at first. Remember, the body is lighter than water, when the lungs are supplied with air, and it will float; and if you do not struggle and thereby thrust your nose under the surface, and shut out the air from the lungs, you will not sink. A few resolute trials in the manner described, will enable you to say "I can swim." After this, frequent practice will enable you to quicken your motions, and attain all the rapidity of an expert.

FLOATING AND SWIMMING ON THE BACK.

When the young swimmer has acquired some degree of confidence in his powers, he should learn to place himself so as to float at his ease upon the surface. This will

It is quite likely that this scientific gardener like many others we have known, depended too much on what he read in books, without using his own eyes sufficiently; which reminds us that a new relative has just knocked at our sanctum, to ask the privilege of talking a little with you. We introduce to the *Agriculturist* family "Aunt Bessie"—hear what she says about

EYES OPEN.

"Come on, Will, it is time we were off. The sun is getting high, and we want to pick our strawberries in time to go to the old mill this afternoon."

"Wait just a minute, Harry, while I see Jacob put this piece of work together."

Will was Harry's guest, and as he was an obliging boy, he did not hurry him again, but whistled about a little restlessly, until he was ready. As they walked on to the strawberry field, Harry could not help saying,

"I can not see why you take such an interest in old Jacob's tinkering. He is always about some such works, but I never think of watching him."

"Well, I watch him to learn. He has taught me, at least half a dozen new things since I have been here this week. Indeed I have made it a sort of rule lately, to pick up what knowledge I can everywhere. It is only necessary to keep the eyes open, and it adds a great deal to one's enjoyment."

"But you will never have occasion to use this knowledge. You are not going to be a carpenter, or a blacksmith or any such thing, your are going to college."

"Still some knowledge of all these things may be very useful to me some day, or enable me to be of use to some one else. Besides our teacher says that every new idea enlarges the mind, and fits it better for action in any business."

"Well, I hope your knowledge will be very useful, but here we are at the strawberry field. They are thick as clover, and red as little Nelly's lips. We will put the very biggest we can find into this little basket for her, I brought it on purpose, and she will be so pleased."

When the boys reached home again with their well filled baskets, they were very warm and thirsty. As they passed the barn, Harry suddenly remembered that he had forgotten to water his beautiful chestnut pony, and the poor fellow must be suffering.

"Oh, I am so sorry, Will," he exclaimed, "Let us hurry as fast as we can."

But he made "more haste than good speed," for in seizing the moss-grown bucket, and dashing it down into the well, a link in the chain which was quite worn, gave way, and down went the bucket to the bottom, twenty-five feet from the well curb. There was no one at home, as Harry's father and mother had gone to town to spend the day, taking little Nelly with them. Harry was quite in despair, but Will seemed much at ease.

"If you can get me a pair of steel yards and a rope, I think I can bring up the bucket," said he. Harry ran to the "cellar-way" and brought out the clothes line and steelyards very quickly. The rope was then fastened securely to them, and carefully lowered to the bottom of the well. After sounding about a little while, one of the iron hooks caught in the chain, and the two boys were able to draw the bucket up quite full of sand and water. When the accident had been repaired, Harry expressed his surprise that Will was always ready for such emergencies.

"It is only by keeping my eyes open that I learn such little things. I saw a poor black-washerwoman we had once, fish up our bucket in that way, when just such an accident happened at our house. So you see even a poor colored woman can teach us something useful."

Harry was quite impressed by this little incident, and resolved from that time to follow his young friend's example.

I wish I could induce all my young readers to do the same. Sir Walter Scott tells us that he never met a person so ignorant or stupid, that he could not gain some new idea from him, which was worth possessing. Try to remember this wherever you are, and at all times, and see what a valuable treasury of new ideas you will acquire in even a single week.

A PLUM PUDDING STORY.

Aunt Sue contributed this for her relatives of the "Merry" family, but will not object to repeating it to her many friends in the *Agriculturist* household.

A friend of ours told a story of a Yankee captain and his mate, something after this fashion: "Whenever there was plum pudding made by the captain's orders, all the plums were put into one end of it, and that end placed next to the captain, who, after helping himself, passed it to the mate, who never found any plums in his part of it. Well, after this game had been played for some time, the mate prevailed on the steward to place the end which had no plums in it next to the captain. The captain no sooner saw the pudding, than he discovered he had the wrong end of it. Picking up the dish,

and turning it in his hands, as if merely examining the china, he said—'This dish cost me two shillings in Liverpool'—and put it down again, as though without design, with the plum end next to himself. 'Is it possible?' said the mate, taking up the dish—'I shouldn't suppose it was worth more than a shilling'—and, as if in perfect innocence, he put down the dish with the plum end next to himself. The captain looked at the mate—the mate looked at the captain. The captain laughed—the mate laughed—'I tell you what,' said the captain, 'you've found me out, so we'll just cut the pudding lengthwise this time, and have the plums fairly distributed hereafter.'"



Into which are thrown all sorts of paragraphs—such as NOTES and REPLIES to CORRESPONDENTS, with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.

Our Circular Letter—Explanation.

During the present year, several changes in the address of subscribers, have been made on our books; some names have been changed from a single address to clubs; others have changed their post office address, etc. To be sure that our books were right, and to give notice of expirations of subscriptions, we addressed a circular letter on April 2nd and 10th, to all names on our mail books, where the address was not continued the same as last year. The names were simply copied off by a mail clerk, and in two or three instances we find errors were made in not observing the renewal. We supposed the postscript would sufficiently explain the object of the letter, but it seems this was not always fully understood. We desire therefore to repeat here, that the regular receipt of the *AGRICULTURIST*, is always proof positive that the name of a subscriber is right on our mail books, and that the paper is paid for. As stated in our standing prospectus on the last page: "The paper is considered paid for whenever sent, and no one need ever expect a bill for papers already received. If you get the *Agriculturist* at all, somebody has paid for it, or caused it to be sent to you without expense to yourself. Please consider this a standing receipt."

Address Wanted. Will Mr. E. Remington please send his full address: naming the Post Office, County, and State, that we may make the change he requests. Looking through our whole subscription list for a single name, is like examining a forest to find one particular leaf. We index the Post Offices but not individual names.

Wire Fences.—"Uncle Jacob" sends a communication on this subject which we cannot find space for at length. He recommends the use of No. 8 wire, which costs about six cents per lb., and weighs nearly one lb. to the rod. He prefers putting the wires on posts set in a low wall, say 18 to 20 inches high, which will prevent cattle from thrusting their heads through. He thinks staples better than holes in the posts to support the wires. Four wires with a wall are sufficient. They are kept to proper tension by a weight hung on the middle of the panel.

Thread Worms in Horses.—H. W. Williams, Winnebago Co., Ill., inquires for a certain remedy for this difficulty with which his young horses are affected. Herbert recommends to administer balls of two drachms of tartar emetic, one scruple of ginger, with molasses and linseed oil sufficient to form the ball. Give one dose every other morning, half an hour before feeding time.

Bloody Urine in Cattle.—J. R. Schane, Williams Co., Ohio.—This usually indicates congestion and inflammation of the kidneys, and is attended by constipation of the bowels. Its cause can not, in all cases, be well determined. Animals in high condition are subject to it when near parturition, though at times it proceeds apparently from something taken with the food in the pasture ground. Youatt directs to bleed copiously at first, and repeat it if necessary, and administer Epsom salts, a pound for the first dose, and half pound doses every eight hours after, until the animal purges, which is usually the signal of recovery.

Sheep Poisoned by Laurel.—David Hall, Sullivan Co., Pa. In the first stages of poisoning by Laurel (*Kalmia angustifolia*), the animal throws up a greenish fluid, and immediately swallows part of it. If this can all escape, it usually gives relief. It is recommended by Morrell to tie a stick in the sheep's mouth in such a man-

ner that it will be kept open, and the swallowing prevented, until the retching ceases. Roasted onions and sweetened milk are also prescribed.

Remedy for Hoven in Cattle.—J. T. Budd, Cecil Co., Md., contributes the following. Dissolve three tablespoonfuls of super-carbonate of soda in a pint of water and give it as a drench. This will, he says, give relief in five minutes. It appears harmless, and is worth the trial.

To Preserve the Skins of Animals.—A correspondent sends the following method which he says he obtained from a foreign journal, and has found reliable. Stretch the skin tightly and smoothly upon a board, hair side down, and tack it by the edges to its place. Scrape away the loose flesh and fat with a blunt knife, and work in plenty of chalk with plenty of hard rubbing. When the chalk begins to powder and fall off, remove the skin from the board, fill it with finely ground alum, wrap it closely together and keep it in a dry place a few days. By this means it will be made pliable, and will retain the hair.

Quantity of Pork from a Bushel of Corn. Experiments made by C. M. Clay, showed that one bushel of dry corn made 5 10-lb. lbs. of pork; of boiled corn, 14 7-10th lbs., and boiled meal from 16 to 18 lbs.

Are Cultivated Parsneps Poisonous?—A Reader in Iowa. We have not found them so after cultivating and eating them for many years. The wild parsneps are poisonous, but the garden variety has by long cultivation lost its hurtful quality, and there is little fear of its regaining it while properly cared for. It might, perhaps, by many years of neglect, deteriorate to its wild habit, but having no apprehensions of this, we have sowed the usual quantity this Spring.

Improving Growth of Rhubarb.—A constant reader inquires the reason for placing an open box, or barrel with both heads out, over rhubarb plants. It partially excludes the light, and causes the foot stalk to shoot up taller, to bring the surface of the leaf to the needed stimulus of sunshine. This increases the amount of the edible part, and makes it more tender and less acid.

To Exterminate Wild Onions.—J. G. Laird, Rockbridge Co., Va. Thorough cultivation of a field with corn, potatoes, or other hoed crops, for a succession of years, with good manuring to keep up the fertility, is the best remedy we know, for this or any similar pest.

To Keep Insects from Cucumbers.—T. B. Gamble, Osage Co., Kansas, writes that a few beans planted with cucumbers will keep off the bugs; the beans can be pulled as soon as the cucumber vines have grown large enough to be out of danger. He assures us that it is an effectual remedy—if the bugs in our garden will believe it, we shall be thankful.

Aphides on the Honeysuckle.—Robert McCormick, Montour Co., Pa. The insects you describe as infesting your honeysuckles and roses, appear to be a species of aphides, descriptions of which, with means for prevention, were given in the Insect articles by Mrs. Taylor, in the March and April Nos.

Applying Sulphur to Seeds.—K. Eames, Jefferson Co., N. Y., recommends to soak vegetable seeds several hours before sowing, then after draining off the water, to dust them with sulphur immediately before planting. He states that by this means he has repelled the striped bug and other insects from his garden vegetables. This may do to try as an experiment, we could hardly trust to it alone; some of our insects seem to care little for sulphur, or any other application of the kind. Mr. E. proposes to try the effect of this treatment upon seed potatoes, to prevent rot; we wish him success, but have not much faith.

How shall we Kill Cabbage Worms?—A subscriber in North Carolina writes that cabbages in his neighborhood were almost entirely destroyed last season by a worm that worked its way through the folded leaves and eat out the heart. Snuff, brine, guano, and sulphur were tried without avail. He will be thankful to hear from any one who has succeeded in destroying this intruder.

Scalding the Pea Weevil.—W. W. B. cautions cultivators against using too hot water, for scalding peas preparatory to sowing. He destroyed both weevil and peas by this means. The temperature should not be above 175° or 180° Fahrenheit. Remove the peas after a brief immersion.

The Seventeen Year Locust.—Charles Streeter, Montgomery Co., Pa., writes that this insect appeared in the vicinity of Philadelphia in 1831, and previously in 1824, and that the records show them to have come out regularly at periods of seventeen years before that time, dating as far back as 1700. Consequently they need not be expected in that neighborhood before the year 1868.

Preserving Green Corn.—Wm. Rice, Hamilton Co., O. It is somewhat difficult to preserve green corn in cans, as we have found by experience. We have succeeded, however, by cooking the corn thoroughly, boiling it at least three hours, and then exercising great care to have the cans filled; and all air excluded. It is important that the corn be fresh from the field, a few hours keeping will render it unfit for this use. Even with every precaution, it will some times spoil in the cans.

The Horse Hoe for Stony Lands.—W. W. B. Where stones are small and not too plenty, this implement works to good advantage. In very stony lands, or where there are many "fast" stones, it is not so valuable.

The New American Cyclopædia.—Vol. IX fully sustains the reputation attained by the previous instalments of this comprehensive work. The present issue contains 764 pages, and embraces about 1300 articles alphabetically arranged, extending from HAY to JER. In the Biographical department, we have notices, more or less extended, of over sixty noted individuals now living, giving the reader an introduction to the "men of the times," which can not be found elsewhere. The contributors are among the most distinguished in their several spheres, and the whole work when completed will present a compendium of what is known by the learned.

Bright's Grape Culture.—A plain, practical work, informing cultivators what to do, and how to do it, is rarely met with. We have many times in reading agricultural books, waded through a dreary waste of paper, for information, and found only talk about the subject in hand, plenty of theory but a dearth of facts. We prize this little work because the author goes straight to his subject, gives his directions so clearly that a novice may follow them, and whether they be the very best or not, can easily be demonstrated by experiment. The system of training recommended appears feasible, being easily accomplished, and Mr. Bright states, with excellent results in his own practice. The recommendation of a special fertilizer prepared by the author is the most objectionable feature of the book, giving it too much the air of an advertising medium. With this exception we commend its perusal to vine growers. It contains 120 pages and is sold at 50 cents.

Cheese Making.—Howard Swineford, Union Co., Pa. Very full articles on this subject including the manufacture of the different varieties, were given in a series of prize articles on Dairying, published in the last Vol. of the *Agriculturist*.

Mason and Dixon's Line.—Several inquirers. This term now used to designate the boundary between the free and the slave States, formerly applied to the boundary line between Maryland on one side, and Delaware and Pennsylvania on the other. It was partly surveyed in 1763 by Charles Mason and Jeremiah Dixon, who were employed by Thomas and Richard Penn, and Lord Baltimore. When within about 36 miles of the end of the line, the Sioux Indians compelled them to desist.

Joining a Bar-post with a Rail Fence.—Gutelius Snyder, Montour Co., Pa., describes a convenient plan which we have seen in use. It is better than to set an extra post to be fastened to the bar or gate post by withes, or to support the end of each rail by separate stakes, as is often done. A piece of scantling, or a small post is joined to the side of the main bar post by pins, leaving openings to receive the ends of the rails from the fence. Make this upright piece as long as the bar-post, and set it in the ground with the post.

Label the Trees and Plants.—A good suggestion.—E. C. Komer, N. Y., suggests that it would be very agreeable to the public to have all the trees and plants in the Central Park plainly labeled with their common and botanical names. We heartily endorse the suggestion. There are hundreds of citizens who cannot distinguish an elm tree from a magnolia, but who would like to know the names of the trees they meet with. Young botanists, too, would be aided in their observations, and the pleasures of a walk in that beautiful place would thereby be increased. Will the Commissioners make a note of the matter?

Recipe for Out-door Whitewash.—H. J. Tibbitts, Queens Co., N. Y., gives the following as Humboldt's recipe; which he has proved to be good. Slake the lime, and add for each peck, 1½ lbs. sulphate zinc (white vitriol), and ½ lb. glue dissolved in water.

Locust Trees easily Raised.—Diedrich Steiner, Cumberland Co., Pa., writes that he can raise locust trees almost as easily as corn. He directs to pour boiling water upon the seed, enough to cover them well, stir them a few minutes, and let them remain until swollen. Some will swell in a short time; remove these, add hot (not boiling) water occasionally until all are prepared. Plant them as soon as taken from the water. This

should be done during the latter part of April or first of May.

Solution for Preserving Timber.—S. Osborne, Litchfield Co., Ct. Dissolve one lb. blue vitriol in twenty qts. water, and let the wood soak in it from four to six days. This has been highly recommended, and a trial costs but little. We have not used it, and can not speak with certainty of its merits.

Poultry Book.—D. Ryder, Harrison Co., O. Bennett's Poultryer's Companion, price \$1.25 is the best book of the kind we have seen. We can procure and forward you a copy, post-paid, for that sum.

The Italian Bees.—To a number of inquirers. We have as yet no definite information to give in regard to these bees. Experiments are being made with them in our own neighborhood, which we shall watch carefully. A number of intelligent bee-keepers are taking quite an interest in the matter, and the present season will probably determine whether these bees are superior to our native kinds or not. We are inclined to think the "pure-blooded" Ligurian bees will prove worthy of introduction here. There appears, however, to be some doubt as to the purity of part of those brought to this country. It is claimed, that those coming by the way of Germany, have been crossed more or less with the German bees. We are by no means certain that any of the pure stock has yet been offered for sale in this country. Until this matter is settled, it will be quite as well for our readers to delay purchasing anywhere.

To Make Rhubarb Wine.—Several inquirers. Trim off the leaves and grind and press the stalks in any cider or other mill. To each gallon of juice, add one gallon of water, and six pounds of refined sugar, and fill the casks, leaving the bungs out. A moderately cool cellar is the best place to keep it. Fill up occasionally, either from juice kept on purpose, or with sweetened water, so that the impurities which rise to the surface while fermentation is going on, may be worked off. When sufficiently fermented, which will require from one to two or more months, bung tightly, and let it remain until Winter, when it may be racked off into other casks, or bottled. Some persons refine it before bottling, by putting into each barrel two ounces of isinglass, dissolved in a quart of wine.

Parsneps for Stock.—C. J. Edwards, Orange Co., N. Y. This root contains a large amount of sugar and other nourishment, and is therefore well adapted for feeding stock, particularly milch cows. It adds to the richness of the milk, without importing any unpleasant flavor. It may remain in the ground the whole winter without injury, but on the contrary its quality is improved by the action of the frost. This makes it valuable for Spring feeding. It requires a deep, rich soil and clean tillage.

To Test the Quality of Milk.—C. J. Snow, Scott Co., Va. The comparative value of the milk from different cows in a dairy is easily ascertained by partly filling a number of glass tubes, putting the milk of each cow in a separate tube, and leaving it undisturbed until all the cream rises. The comparative thickness of the cream is then readily seen. A series of tumblers will serve equally well.

Proper Season for Budding.—P. S. Smith, Cattaraugus Co., N. Y. Buds may be inserted as soon as they are fully developed, and the bark of the stock will peel readily. Full directions for the process have been given in former volumes of the *Agriculturist*.

American Pomological Society.—The eighth annual meeting of this Association is appointed to be held at Philadelphia, Pa., commencing Sept. 10th.

Important Cattle Sale.—It will be noticed by reference to our advertising columns, that a sale at auction of thorough bred animals of various breeds from the herd of A. B. Conger, Esq., President of the N. Y. State Agricultural Society, will be held during the present month. We call attention to the fact, because we believe that every opportunity for improving the breed of animals in the country should be embraced. We are pleased to learn from Mr. Conger, that he intends to have hereafter an annual sale of this kind, provided sufficient encouragement is given to warrant it.

List of Agricultural Exhibitions Wanted.

As due notice of the time and place of holding the various Agricultural State and County Exhibitions is very desirable for the convenience of exhibitors and others, we wish to make out as complete a list as possible. Will the officers of the various Societies, or others, oblige us by directing to the address of the *Agriculturist* a copy of their circulars, or premium lists, or some local paper, giving the place of the exhibition, with the name of the County and State, and the day of commencing and closing? The lists we have published in previous years

have been widely copied into other journals, and thus proved useful to the whole country.

From the Christian Advocate and Journal. Progress.

Art has by no means exhausted itself either in the fine or mechanical departments. In the latter, particularly where usefulness and economy are combined, astonishing progress has been made within the last few years. In this respect it must be conceded that the American artisan excels those of any other country. Weighed in the balance of a just criticism, all are obliged to admit that the scales of Fairbanks & Co., New York, who have devoted their time and attention to the science of weighing, as applied to the compound balance, by which it has been brought to the highest perfection, are, without exception, the best ever invented. We know whereof we affirm, because we have tested their value, and are fully satisfied of their superior merits. The various descriptions of their platform scales embrace every variety of size and form, from the mammoth contrivance of a canal lock scale, capable of weighing five hundred tons, to the nice and delicate balance required for chemical analyses and pharmacy, in which the weight of a thousandth part of a grain is marked by a sensible deflection of the beam. The introduction of these scales has wrought a revolution in the transaction of various business, and their accuracy is such that a uniformity in weights has been established all over the country, thus making them a national, legalized standard. Nor are they confined to the United States; they have found their way to almost every part of the civilized world, and are adapted to the standard of all countries, so that it may be said all nations, if not "weighed in these balances," at least weigh by them. They are adapted to every branch of business, and so great is the facility for weighing that measure has given place to weight. Instead of the half bushel measure for wheat, corn, and other cereals, as formerly used, whereby only a small number of bushels comparatively could be measured a day, now, by the apparatus connected with the platform scales, thousands of bushels are weighed in a single hour. Railroad cars, loaded with live stock, coal, iron ore, and other heavy freights, are weighed by platform scales constructed under the track; and canal boats, freighted with hundreds of tons, are weighed with dispatch and accuracy. At the company's warehouse in New York may be found every variety and style of platform scales required in business transactions; also, weighing beams, gold balances for banks, brokers, jewelers, druggists, confectioners' scales, letter balances, and every description of weighing apparatus.

Vine Growers Convention.

The Southern Cultivator says it is proposed to hold a Convention of Vine Growers and others interested in grape culture, during the coming Summer at Aiken, S. C. The idea originated with the Aiken Horticultural & Vine Growing Association, who, through a committee, have addressed similar associations in the country, prominent grape growers, and others interested. The objects set forth, are, to secure a uniform system of names for the different varieties of the grape, and to determine upon some manner of naming the different wines. Much confusion now exists in both these respects. Many grapes are now known by different names in different localities, and in the rapid multiplication of new sorts the difficulty is increasing. Wines in this country are named after the grape from which they are manufactured; but from the Catawba alone, it is said a hundred different sorts of wine are manufactured; the quality depending upon the excellence of the fruit, and the manipulation. In Europe, varieties are known by the name of the district where they are made, and the different brands designate the particular locality. A convention of those interested, could do much to settle these points. A large amount of useful, practical information would undoubtedly be brought out by the discussion of the above and kindred topics in the manner proposed. The time for holding the Convention is the third Tuesday in August next, (21st,) and a general invitation is extended to all interested. Communications on the subject may be addressed to A. De Caradeuc, and Dr. J. C. W. McDonald, Woodward, S. C.; E. J. C. Wood, and H. W. Ravenel, Aiken, S. C.; or D. Redmond, Augusta, Ga. Secretaries of the different Associations connected with Vine Culture, are requested to forward the names and localities of their Societies, and such suggestions and information as they think proper.

REMARKS.—All gatherings of practical men, like the one proposed above, are very useful, and we gladly give them the widest publicity. But during the hot month of August a large number of Southern men will be absent at the North, and it can hardly be expected that at that season a sufficient number of interested persons from all parts of the country to render the action of the convention authoritative, will visit a Southern city.

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

N. B. These premiums are not offered for competition, but as direct pay for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.

REMARKS.—The premiums below, except No. IV, are all for NEW SUBSCRIBERS ONLY, as we can only afford to pay premiums for once on the same subscriber. But in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one NEW name. Names need not all be at the same Post Office.

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium III.—Every person sending in a club of 10 new subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 new or old subscribers at 80 cents each, will be entitled to 16 copies.

Premium V.—Every person sending 25 new subscribers at 80 cents each, will be entitled to the three Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 new subscribers at 80 cents each, will be entitled to a silver-cased pocket Microscope—with Codding lens. Value \$4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 new subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary*. Price \$6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

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able instrument for common use in predicting changes in the weather, marking the height of a place above the level of the sea, etc.—Price \$10.

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Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New York, Saturday Morning, May 19, 1860.

The receipts of the principal kinds of Breadstuffs have increased materially since the general resumption of canal, river, and lake navigation. Receivers have been offering their supplies freely. The demand, though fair, has not been equal to the ability of holders to meet it. Most factors have been eager to sell, while buyers have been somewhat cautious in purchasing. Prices have declined materially, and a further reduction is anticipated. Stocks of Flour are now ample. The inquiry is mainly for lots wanted by the regular home trade. There is also some demand for shipment and on speculation. Early in the month, the foreign advices were favorable to export operations. The latest accounts from England have been less encouraging. Under these circumstances, the market closes heavily, with a downward tendency....Wheat is abundant and obtainable on easier terms. Buyers, however, are now moving with reserve, as they expect to obtain some further concessions from holders. The main inquiry is for Milwaukee Club, and Chicago Spring. These varieties are sought after by local millers, as well as by shippers. The advance in rates of freight to British ports has tended to restrict export movements. Corn is unusually plenty, and is decidedly heavy. Prices leaning strongly in favor of buyers. At the reduced rates, sound lots have been in more request, in part for the East, and for shipment to England. The receipts are mainly composed of mixed Western....Rye is scarce and is inquired for. It is quoted higher....Barley has been freely offered and has been depressed. The demand has been moderate....Oats have been unsettled. Toward the close, with liberal arrivals and a moderate inquiry, prices tended downwards....Oatmeal has been briskly sought after, chiefly for export, and buyers have purchased considerable lots, at \$4 75@45 per lb....Cotton has been in moderate request, mainly for domestic spinning, at our revised quotations. The present crop is expected to yield as much as 4,000,000 bales. The prospects of the new crop are beginning to be carefully watched. The fact of a yield of four and a half millions being taken from our markets at a remarkably uniform high range of prices, indicates an expansion of the Cotton trade that gives increased interest to the prospect of next year's supply. After the rapid increase of the present crop over all previous years, there is already a tendency developing to expect a proportionate increase in the next yield. Planters will doubtless endeavor to extend the area of such profitable culture; but the present season

shows that it is probably more profitable to produce the clean, desirable grades, than the low, sandy rubbish now so abundant in all markets. It is yet too early to form speculations on the subject, and for the present it is sufficient to know that on the whole the new growth commences favorably, although it must be mentioned that complaints of injury from frost, drouth, etc., are not unfrequent....Hay has been less abundant, and with a good demand it has increased in value....Hops, Rice, and Tobacco have been moderately sought after at uniform rates....More activity has been discernible in Provisions, Naval Stores, and Whisky....The transactions in Hemp and Wool have been limited. Prices of the latter have favored purchasers....Other descriptions of Produce have been lightly dealt in.

CURRENT WHOLESALE PRICES.

	April 18.	May 19.
Flour—Superf to Extra State	\$3 30 @ 5 35	\$3 15 @ 5 20
Superf to Extra Western	5 45 @ 7 75	5 15 @ 7 75
Extra Western	5 45 @ 7 75	5 15 @ 7 75
Fancy to Extra Genesee	5 60 @ 7 50	5 45 @ 7 50
Super to Extra Southern	6 20 @ 7 60	6 15 @ 7 75
Rye Flour—Fine and Super	3 50 @ 4 25	3 40 @ 4 20
Corn Meal—Do	3 50 @ 4 05	3 70 @ 4 00
Wheat—Canada White	1 50 @ 1 65	1 50 @ 1 60
Western White	1 50 @ 1 70	1 50 @ 1 65
Southern White	1 55 @ 1 72½	1 50 @ 1 70
All kinds of Red	1 21 @ 1 50	1 24 @ 1 45
Corn—Yellow	76 @ 76	75 @ 77
White	76 @ 76	75 @ 77
Mixed	72½ @ 74	70 @ 73
Oats—Western	44 @ 44	40 @ 41
State	45 @ 45	41 @ 42
Southern	39 @ 42½	37 @ 39
Rye	83 @ 84½	87 @ 88
Barley	70 @ 85	70 @ 82½
White Beans	45 @ 1 10	50 @ 1 10
Hay, in bales, per 100 lbs	80 @ 1 10	1 00 @ 1 25
Cotton—Midlings, per lb	11½ @ 11½	1 11½ @ 1 11½
Rice, per 100 lbs	3 50 @ 4 37½	3 62½ @ 4 50
Hops, crop of 1859 per lb	5 @ 15	6 @ 13
Pork—Old Mess, per bbl	17 37 @ 18	17 @ 17 50
Prime, do, per bbl	19 25 @ 20	19 @ 20
Beef—Repacked Mess	9 00 @ 10 50	8 50 @ 10 50
Country mess	5 00 @ 6 00	5 00 @ 6 00
Hogs, Dressed corn, per lb	10½ @ 11	11 @ 11½
Lard, in bbls, per lb	10½ @ 11	11 @ 11½
State, per lb	11 @ 12	13 @ 13
Cheese, per lb	9½ @ 13	6 @ 11
Eggs—Fresh, per dozen	13½ @ 14	11 @ 12
Poultry—Fowls, per lb	14 @ 15	13 @ 13
Geese, per lb	10 @ 12	10 @ 12
Ducks, per lb	18 @ 20	16 @ 18
Turkeys, per lb	15 @ 17	16 @ 17
Wild Pigeons, per doz	1 00 @ 1 25	1 00 @ 1 25
Partridges, per pair	75 @ 87	87 @ 1 00
Peas, per lb	12½ @ 14	13½ @ 14
SEED—Clover, per lb	7½ @ 8	8 @ 9
Timothy, per bushel	3 25 @ 3 75	4 37 @ 4 50
SUGAR, Brown, per lb	5½ @ 6	6 @ 6
MOLASSES, New-Orleans, per gal	45 @ 50	46 @ 50
Coffee, Rio, per lb	12½ @ 14	13½ @ 14
TOBACCO—Kentucky, &c, per lb	4 @ 12½	3½ @ 13
Seed Leaf, per lb	6 @ 25	6 @ 25
Wool—Domestic fleece, per lb	24 @ 28	32½ @ 37½
Domestic, pulled, per lb	28 @ 48	27½ @ 47½
Hemp—Tow'd Amer'n pr ton	120 @ 150	120 @ 150
Dressed American, per ton	160 @ 200	160 @ 200
TALLOW, per lb	10½ @ 10½	10 @ 10½
OIL CAKE, per ton	35 00 @ 37 00	32 00 @ 36 00
APPLES—Dried, per lb	4½ @ 5	4 @ 5
Dried Peaches—pr lb. South'n	6 @ 14	6 @ 14
Dried Raspberries, per lb	18 @ 18	18 @ 22
Dried Cherries, pitted, per lb	10 @ 17½	17½ @ 20
POTATOES—Mercers, p. bbl	1 50 @ 1 50	1 75 @ 2 00
Peach Blows, per bbl	1 25 @ 1 50	1 87 @ 2 00
Nova Scotia, per bushel	45 @ 50	53 @ 60
New Bermuda, per bbl	1 50 @ 2 50	4 00 @ 4 50
ONIONS, Red, per bbl	1 50 @ 2 50	4 00 @ 4 50
White and Yellow, per bush	1 50 @ 2 50	1 12 @ 1 25
TURKEYS, per bbl	75 @ 87	50 @ 62
SPINACH, per bunch	37 @ 75	6 @ 10
RHUBARB, per 100 bunches	2 00 @ 4 50	1 50 @ 3 00
REDISHERS, per 100 bunches	1 50 @ 3 00	2 00 @ 4 00
GREEN PEAS, South'n, p. bbl	2 00 @ 4 00	

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats.
27 bus. days this mon. 287,634 174,601 534,820 17,432 23,254 301,377
27 bus. ds. last mon., 130,672 7,549 230,395 9,583 26,109 124,343

SALES. Flour, Wheat, Corn, Rye, Barley.
27 business days this mon., 367,385 910,500 952,500 53,100 156,908
27 business days last mon., 260,580 488,250 727,000 60,000 167,000

The following is a statement of the movements of Cotton for the past week, and since the first of September last, compared with the five preceding years:

	Past week.	Since Sep. 1.	To Gt. Brit.	To Fr.	Oth. P.	F. P.
1850-50.	31,000	4,277,000	58,000	1,000		21,000
1856-56.	39,000	3,534,000	52,000	9,000	6,000	
1857-57.	53,000	2,830,000	32,000	15,000		9,000
1856-77.	33,000	2,802,000	29,000			3,000
1855-66.	45,000	3,269,000	33,000	10,000		5,000
1854-55.	40,000	2,406,000	21,000	17,000		4,000

EXPORTS SINCE SEP. 1.						
	To Gt. Brit.	France.	Other P.	P.	Total.	Stock.
1850-60	2,387,000	536,000	436,000		2,359,000	510,000
1858-9	1,667,000	377,000	486,000		2,530,000	450,000
1857-8	1,368,000	337,000	291,000		1,998,000	575,000
1856-7	1,234,000	354,000	354,000		1,932,000	340,000
1855-6	1,570,000	443,000	443,000		2,456,000	404,000
1854-5	1,185,000	359,000	214,000		1,758,000	325,000

N. Y. Live Stock Markets.—The CATTLE MARKETS have been well supplied during the past four weeks. Receipts 15,500, or an average of 3,875 per week. As fresh eggs are abundant, and other fish plenty, and new vegetables are arriving quite freely from the South, the demand for beef is not large, and prices continue low—about two cents per lb. lower than at this time last year. The highest prices of last year were obtained in May, when the average of all sales reached 11c. per lb. on two different market days. The highest average reached this year is 9c., which was obtained one week in February and two weeks in March—most of the averages

for this year thus far, have been 8½¢@9½¢. The present rates this week, May 16th, with 3,614 cattle on sale, are, Prime 9½¢@10¢; Medium 8½¢@9¢; Poor 7¢@8¢. General average 8½¢ per lb, estimated dressed weight, which is ½¢ per lb. higher than four weeks ago, but the cattle of this week, are much better than those sent in last month.

VEAL CALVES continue to come in abundantly, faster than they can be sold at other than very low prices. The receipts of veals are always large at this season, but the numbers now arriving are in excess of last year's receipts. For the four weeks just ended, they amount to 5,084, which is an average of 1,271 per week. Prices have ruled low, and at the last market, good calves sold slowly at 5¢@5½¢ per lb., live weight—a very few choice ones 6¢—medium calves 4¢@4½¢, and poor ones 3¢@3½¢. Many small calves, less than a week old, are sold to fourth class butchers at \$1.00@1.50 each.

SHEEP AND LAMBS have been rather scarce, the number received for the four weeks just ended, being 22,906, or an average of 5,726 per week. This is an increase over last month, and still larger numbers may naturally be expected, as the sheep are deprived of their fleeces and gain flesh after rearing early lambs. The demand is very good just now. At the last general market, May 16th, the stock was all sold, the best, with wool off, at from 5½¢@6¢ per lb., live weight, down to 4½¢@5¢ for common and poor stock.

HOGS.—Receipts have been heavy of late, compared to the requirements of the market, when no more pork is wanted than can be sold fresh, and as Summer approaches, more mutton and beef are consumed to the exclusion of swine's flesh. For the four weeks ending May 16th, 23,345 hogs have been sent in. This is an average of 5,836 per week, and is more than have readily been sold. There was a surplus at the last market, when prime corn hogs brought 5½¢@5½¢; Still hogs 5½¢@5½¢; Mast hogs 4½¢@5¢, and light stock hogs 6¢@6½¢ live weight.

The Weather since our last report, (April 18) has been quite variable, and the indications of an early Spring were soon changed by cool wet weather. The crops have, however, been put in at about the usual season, and, for the most part, under favorable circumstances, although in some localities severe drought has prevented seed from vegetating, and injured the coming hay crop. The fruit prospect is good. The Winter was not so severe as to materially injure either trees or buds in many places, nor have late Spring frosts killed the blossoms or young fruit, except in very few localities. Fruit trees, of all kinds, have shown an abundant bloom in the country immediately surrounding this city. Our DAILY NOTES, condensed, read thus:—April 19, fine and warm with light rain at night—20, cloudy, with a little rain—21, heavy showers during the day and night—22, raining much of the day, peach trees in bloom—23, cloudy—24, clear and cool, Stuyvesant pear tree in this city, in bloom—25, cool with rain and snow squalls—26 to 30, clear, and fine growing weather. May 1, cloudy A. M., N. E. rain storm P. M., which continued until noon of the 2d—4 to 7, clear, warm and fine—8, cloudy, rain at night—9, cloudy, 10, light rain—11, and 12, warm, but mostly overcast—13, warm, clear, and cloudy by turns—14, heavy showers—15, clear and cool—16, 17 and 18, cool and cloudy, with occasional light rain.

Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) indicates snow; rain.]

JANUARY, 1860.											
1.....8°	8.....36	15.....34	22.....35	29.....32	2.....7	9.....33	16.....34	23.....37	30.....38	3.....12	10.....36
4.....24	11.....35	18.....29	25.....46	.....	6.....12	13.....28	20.....30	27.....23	.....	8.....9	15.....26
5.....12	19.....32	26.....34	.....	603	9.....23	16.....30	23.....37	30.....38	.....	11.....22	18.....29
6.....12	13.....28	20.....30	27.....23	Av'ge.29	14.....29	21.....38	28.....24	.....	.....	12.....23	19.....32
FEBRUARY.											
1.....10	7.....40	13.....30	19.....19	25.....28	2.....5	8.....30	14.....41	20.....16	26.....28	3.....6	9.....29
4.....23	10.....22	16.....28	22.....35	.....41	5.....23	11.....16	17.....12	23.....49	29.....36	6.....12	13.....28
7.....38	14.....26	21.....38	28.....24	.....	8.....9	15.....26	21.....30	27.....33	.....	10.....22	16.....28
MARCH.											
1.....47	8.....36	15.....33	22.....25	29.....36	2.....50	9.....34	16.....32	23.....26	30.....42	3.....39	10.....31
4.....46	11.....31	18.....36	25.....32	.....48	5.....43	12.....33	19.....41	26.....33	.....1139	6.....44	13.....34
7.....38	14.....34	21.....41	27.....30	Av'ge.37	8.....45	15.....42	22.....38	29.....44	.....	9.....49	16.....43
APRIL.											
1.....53	7.....28	13.....46	19.....42	25.....38	2.....53	8.....49	14.....51	20.....55	.....48	3.....50	9.....51
4.....47	10.....45	16.....38	22.....42	.....44	5.....49	11.....43	17.....42	23.....44	.....46	6.....45	12.....42
MAY.											
1.....44	5.....50	8.....53	11.....56	14.....58	2.....47	6.....53	9.....49	12.....56	.....48	3.....50	7.....56
4.....49	7.....56	10.....51	13.....58	.....48	.....	.....	.....	.....	.....	.....	.....

Will the Coal-Beds Last?—The Philadelphia Ledger thus answers the question. The following is a table of the areas and solid contents of the coal-fields in the principal countries of the world, as given by Professor Rogers, in his "Description of the Coal-Fields of North America and Great Britain," annexed to the "Government Survey of the Geology of Pennsylvania:"

	Square miles of coal area.	Total square miles.
United States.....	190,650	204,140
British Provinces of North America.....	7,530	
Great Britain.....	5,400	8,904
The rest of Europe.....	3,564	

The estimated quantities of coal in the principal countries are as follows:

	Tons.
Belgium.....	36,000,000,000
France.....	59,000,000,000
British Islands.....	190,000,000,000
Pennsylvania.....	316,400,000,000
Great Appalachian coal-field (this name is given to the bituminous coal-field which extends through parts of Pennsylvania, Ohio, Kentucky, Tennessee, and Virginia).....	1,387,500,000,000
Indiana, Illinois, and Western Kentucky.....	1,277,500,000,000
Missouri and Arkansas Basin.....	729,000,000,000
All the productive coal-fields of North America.....	4,000,000,000,000

A survey of the figures will serve to tranquillize any immediate apprehensions of a short supply of coal. It will be seen that, at the present rate of consumption, 100,000,000 of tons per annum, the coal-fields of Pennsylvania alone would meet the demand for 3164 years. If this consumption were doubled—viz., 200,000,000 tons—the Great Appalachian field would meet the strain for 6037 years. If it were quadrupled—viz., 400,000,000—the productive coal-fields of North America would suffice for the world's supply for 10,000 years to come. To this we must add the consideration that new coal-fields are brought to light as exploration becomes more extensive and exact.

Dr. Nordenskiöld, a learned Flemish traveller, who has just returned from a visit to the Arctic regions, announces that he discovered anthracite coal as far North as Spitzbergen. One of the most remarkable features of the coal system of the globe is, its liberal distribution over the northern hemisphere, where it is most needed; and it will probably be found in the still unexplored regions of Central and Northern Asia.

The Editor of this Paper Missing.

As soon as the *May Agriculturist* was sent to press, the Proprietor left the office one evening, apparently in his usual frame of mind, and giving no intimation of a prolonged absence except a casual remark that "he had half a mind, for the first time in eight years, to leave the next (this) number for his associates to manage alone, except contributing two or three of his usual articles." We supposed he was merely thinking aloud, imagining, probably, how it would appear to take a seat outside the "sanctum" and watch the proceedings, as others have been surveying his labors so long. But, next morning, behold his seat in the office was vacant; the next and the following day passed and no Proprietor came. Four weeks have gone, but he still fails to show his face. Our fears for his safety have been relieved from time to time, as the printers have now and then received a little "copy" in his well known hieroglyphics. We therefore wish our readers to lay the sins of omission and commission in this paper to the charge of the undersigned—the responsible editor, being in this instance wholly irresponsible. If the June number be found not unworthy a place in the series, it will be gratifying to the friends of the *Agriculturist* to know that the corps of office associates and contributors selected by Mr. Judd, are equal to their work.

ASSOCIATE EDITORS.

P. S.—Several farmers who come in from Long Island describe a somewhat noticeable looking man whom they have seen at work with a gang of twenty five to forty men, draining, digging, spading, planting, laying out new grounds, setting out all sorts of fruit and ornamental trees, shrubs, etc., etc., and going into "high culture" generally. The old style cultivators in the neighborhood shake their heads rather significantly. Some say he is "running things into the ground" especially with the drain tiles, which may be true. Others think he belongs to the class of modern "insane farmers" whom "too much learning has made mad." They say, however, there appears to be a "method in his madness," for he gives pretty good reasons for his operations. From the description of the man, we suspect he may be our missing editor, though from what they say of his sun-burned countenance, slouched hat, cowhide boots, farmers clothes, and the way he works, he would hardly be taken for the editor of a leading city journal. If this be he, we shall hear from him, for after he has finished his explorations in, upon, and probably under the surface soil, he will tell our readers what he found there.

Notes on Postage.

No Postmaster has any legal right to charge over Six Cents a year postage on the *American Agriculturist*. The paper is manufactured expressly with reference to having each number weigh a trifle less than three ounces, when weighed dry and without the wrapper, as the law directs; and the law is explicit that periodicals weighing not over three ounces, shall be charged one cent each, if sent singly, and only half this rate when the postage is paid quarterly in advance at the office where received.

Postage Stamps are convenient for remitting small sums; they should always have a piece of paper between the gummed sides, when mailed, to prevent their adhering together. Ten cent stamps are not so easily sold as 3-cent stamps, but can be disposed of in time. The 3-cent stamps are most desirable.

Missing Numbers Supplied.

Any copy of the *Agriculturist*, failing to reach a subscriber through carelessness of the mails, will be cheerfully replaced without charge. Copies received, and afterwards lost or spoiled, will be supplied at the regular rates.

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We have complete sets of volume (XVIII), bound in neat muslin covers, with gilt lettered backs—also bound sets of Vol. XVII and Vol. XVIII in one cover. We have also bound and unbound copies of volumes XVI and XVII singly, and the two bound together.

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(They can not go unpaid.)

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Vols. XVI, XVII, or XVIII, bound.....\$2.00.
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Of Vols. XII, XIII and XIV, we have some sets bound and unbound at the same prices as named above for Vols. XVI, XVII, and XVIII.

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Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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Thirty-three and one third cents per line of space for each insertion, (three lines for \$1)
One whole column (145 lines) or more—\$40 per column.

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VALUABLE FARM FOR SALE IN VIRGINIA.

250 Acres. 6 miles from Fredericksburg, 1600 Apple, Peach, and Dwarf Pear Trees, Soil clayey loam, clay subsoil. Climate pleasant, and location as healthy as any in the United States. Price \$25 per acre. Intending to remove South.

ABRAM VAN DOREN, Falmouth, Va.

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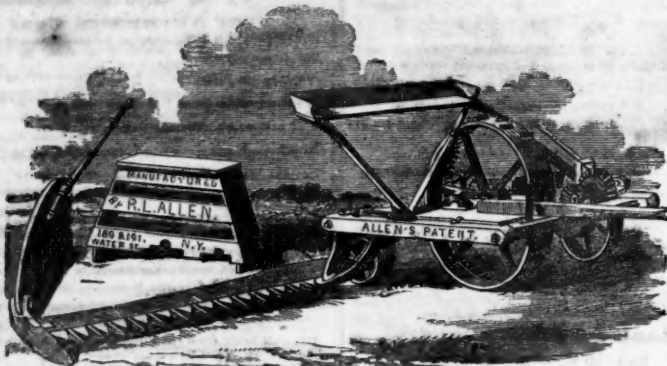
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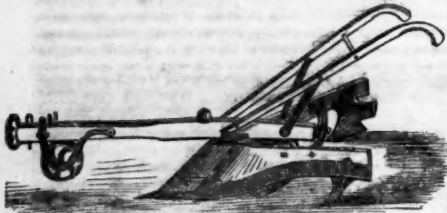
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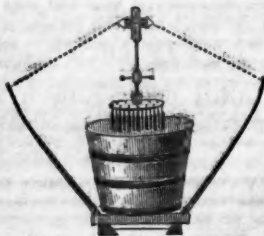
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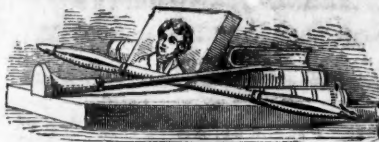
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makes Boots and Shoes and all leather impervious to water, will keep so; polish as well after as before, and last at least half as long again for using it; which everybody ought to have.
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Chaffin, Melton & Co.; Carr, Howard, Sanger & Co.; Wells & Christie; Ellis Bro. & Co.; Wessen & Co.; Wassen, Walter & Co.; Wm. Bryce & Co.; Norton Jewett & Co.; Harmon, Hays & Co.; S. R. Van Duzer & Co.; Prichot, Bruen & Seabury; Walsh, Coulter & Co.; Chapman, Lyon & Co.; J. T. Moore & Co.; J. H. Ransom & Co.; Benedict, Hall & Co.; A. B. Sands & Co.; Floyd Clarkman; Graden McCready & Co.; Harrell, Risley & Kitchen; Cook, Dowd, Baker & Co.; Gashier & Davies; Porogo, Bulker & Plimpton; Freeland Symes & Co., and by all Boot and Shoe, Hardware, Druggists, Groceries, and Yankee Notion Houses. Send your orders.
A. BROWER & CO., No. 4 Reade-st., New-York



DESIGNING AND ENGRAVING ON WOOD.

All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description.
THOMAS COX,
105 Nassau-st., corner of Ann-st., New-York.

Important to Housekeepers!

E. R. DURKEE & CO'S
SELECT SPICES.

In this age of adulterated and tasteless Spices, it is with confidence that we introduce to the attention of housekeepers these superior articles. We guarantee them not only

absolutely and perfectly pure,

but ground from fresh Spices, selected and cleaned by us expressly for the purpose, without reference to cost. They are beautifully packed in tinfoil, (lined with paper,) to prevent injury by keeping, and are full weight, while the ordinary ground Spices are almost invariably short. We warrant them, in point of richness and flavor,

beyond all comparison,

as a single trial will instantly prove.
Manufactured only by **E. R. DURKEE & CO., New-York.**
For sale by dealers in choice groceries generally.

IMPORTANT TO FAMILIES.

MAKE YOUR OWN SOAP.

"SAPONIFIER,"

THE READY FAMILY SOAP MAKER.

Cost of one pound Saponifier (in iron box) 25c.
4 1/2 pounds of refuse kitchen grease, boiled about four hours, with the Saponifier, which would ordinarily be thrown away, or sold at one cent per pound, say, 20c.
45c.

Forty-five cents, therefore, is the whole cost of fifteen gallons of very superior soft soap, a perfect jelly.

TRY IT!!!

It will clean type to perfection, and where a strong lye is wanted for any purpose, it will be found valuable.
To be had of all respectable druggists and storekeepers.

BEWARE OF COUNTERFEITS.

The Original, Genuine, and Patented Article only made by
THE PENNA SALT MANUFACTURING COMPANY.
Trade supplied and Circulars sent by addressing
LEWIS, JAMES & CO., Agents,
231 South Front-st., Philadelphia, Pa.

SAPONIFIER,

OR

CONCENTRATED POTASH.

A new article for making Soap, warranted to make Soap without Lime, and with but little trouble. One pound will make 12 gallons of good strong Soft Soap. Manufactured and put up in 1, 2, and 4 lb. cans (in small lots), at the
CHALLENGE CHEMICAL WORKS, New-York.
E. R. DURKEE & CO., Proprietors, 181 Pearl-st., N.Y.

CAUTION.

ITALIAN BEES.

I learn from reliable authority—from those who knew of their exportation from Germany, and from those in this country who have seen them, that a spurious race of this bee has been imported into Philadelphia. After all my efforts to introduce the pure breed, I should much regret the general diffusion of a false one. Those who purchase, therefore, will benefit the public and confer a favor upon me, by demanding to see a bill of sale from me. The spurious breed is from an apitry in Germany, well known to have impure race. My own are direct from the mountains of Italy, where no other race is found.

Those who wish further information, will please apply for circular.
S. B. PARSONS,
Flushing, L. I.

Italian Bees! Italian Bees!

I have a pure stock as there is in the world. I am now making Queens daily—happy to see visitors every fair day. Queens ready to send out in all June—sent by express or private conveyance. Price reduced from \$12.50 to \$10. Sent in an observatory hive with minute directions for their management.
P. J. MAHAN, 720 Chestnut-st., Philadelphia, Pa.
Apitry opposite Navy Yard.

THOROUGH BRED NORTH DEVON
TAND AYRSHIRE BULLS AND HEIFERS. I have some fine young animals bred from Imported Parents, for sale reasonable. Address
ALFRED M. TREDWELL,
No. 45 Fulton-st., New-York City.

JERSEY CATTLE. Commonly known as
"ALDERNEY." SHAGHAI or TARTAR Sheep for sale. Apply to **WILLIAM REDMOND, 4 Barclay-st., New-York.**

SUFFOLK SWINE.—The Subscribers have on hand and for sale pure blood Suffolk Pigs, bred from their own importations and descendants. Address
ISAAC STICKNEY, or } Boston, Mass.
JOSIAH STICKNEY, }

FRANK G. JOHNSON'S

Patent Attenuated Coal Tar.

For exterminating all kinds of insects and Vermin in Field and Garden, Patented March 27th, 1860. By this discovery Coal Tar is wholly deprived of its viscid and sticky nature, rendered perfectly clean to handle (it resembles fine gunpowder,) and made universally applicable, from the tenderest shoot to the full-grown plant, while its power against the insect is very much increased.

5 pound boxes, for testing \$0 50
In bags, 100 lbs. each 2 00
Sold by
R. L. ALLEN, 191 Water-st., New-York.
For further information address

FRANK G. JOHNSON,
121 Willoughby-street, Brooklyn, N. Y.,
or **DANIEL F. TOMPKINS, 74 Wall-st., New-York.**

To Farmers and Gardeners.

The subscribers offer for sale 60,000 barrels of poudrette, made by the Lodi Manufacturing Company, in lots to suit purchasers. This article is in the twentieth year of its introduction into this country, and has outlived fertilizers of every other description, for the following reasons:—

1st. It is made from the night soil of the City of New-York, by the L. M. Co., who have a capital of over \$100,000 invested in the business, which is at risk should they make a bad article.

2d. For corn and vegetables it is the cheapest, neatest, and handiest manure in the world, it can be placed in direct contact with the seed, forces and ripens vegetation two weeks earlier, prevents the cut worm, doubles the crop, and is without disagreeable odor. Three dollars worth of two barrels is all sufficient to manure an acre of corn in the hill.

Price—1 bbl. \$2—2 bbls. 3.50—5 bbls. \$8, and over 6 barrels \$1.50 per barrel, delivered free of cartage to vessel or railroad in New-York City.

A pamphlet containing every information, and certificates from farmers all over the United States, who have used it from two to seventeen years, will be sent free to any one applying for the same.
GRIFFING BROTHERS & CO.,
North River Agricultural Warehouse, 66 Courtland-st., N. Y.

GUANO.

We would call the attention of Guano Dealers, Planters, and Farmers to the article which we have on hand and for sale at

FORTY PER CENT LESS THAN PERUVIAN GUANO

and which we claim to be superior to any Guano or fertilizer ever imported or manufactured in this country. This Guano is imported by **WM. H. WEBB, of New-York, from Jarvis & Baker's Islands, in the "South Pacific Ocean,"** and is sold genuine and pure as imported. It has been satisfactorily tested by many of our prominent Farmers, and analyzed by the most eminent and popular Agricultural Chemists, and found to contain (as will be seen by our circulars) a large percentage of Bone Phosphate of Lime and Phosphoric Acid, and other animal organic matter, yielding ammonia sufficient to produce immediate abundant crops, besides substantially enriching the soil. It can be freely used without danger of burning the seed or plant by coming in contact with it, as is the case with some other fertilizers; retaining a great degree of moisture, it causes the plant to grow in a healthy condition, and as experience has proved, free of insects. For orders in any quantity, (which will be promptly attended to,) or pamphlets containing full particulars of analyses and tests of farmers, apply to

JOHN B. SARDY, Agent,

No. 58 South-st., corner of Wall-st., New-York.

AMERICAN GUANO

FROM

Jarvis and Baker Islands

IN THE SOUTH PACIFIC OCEAN,

Under the protection of the U. S. Government,
IMPORTED BY THE **AMERICAN GUANO CO., N. Y.**

This Guano, far superior to any other Fertilizer known, and of permanent value to the soil, is sold by the Company at their office, No. 66 William-st., in large or small quantities, at \$40 per ton. Liberal discount made to dealers.

Every package sold by the Company will be stamped with their trade mark.
Orders from the country will be promptly attended to. For full particulars and pamphlets, address
AMERICAN GUANO CO.,
No. 66 William-street, New-York.

GENUINE No. 1 PERUVIAN GUANO.

American Guano.

Bone Dust.

Superphosphate of Lime.

Dried Blood and Wool.

Land Plaster.

Poudrette.

For sale at lowest market price, and in quantities to suit.
R. L. ALLEN, 191 Water-st., New-York.

No. 1 Peruvian Guano,

SUPER-PHOSPHATE OF LIME,

BONE DUST.

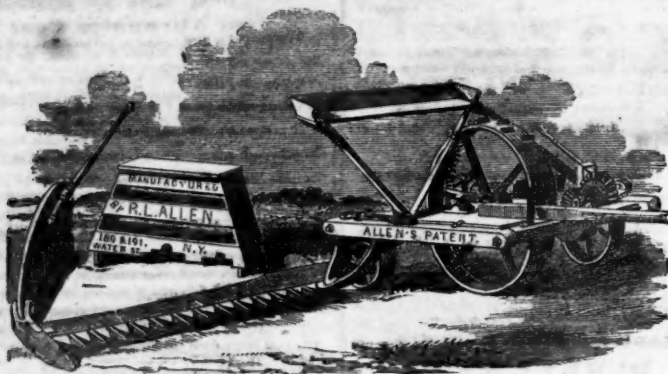
For sale in quantities to suit purchasers at the lowest market price by
A. LONGETT, No. 31 CHURCH-st., New-York.

To Dealers in and Consumers of
Fertilizers.

BEWARE of whom you purchase your FERTILIZERS. Second hand Guano Bags, with the Peruvian Government Stamp, are in demand, and are bringing extremely high prices, for the purpose of mixing Peruvian with worthless guano, and selling it for a pure article. We purchase our Guano direct from the Peruvian Government Agents, and can not therefore be imposed upon. Dealers and consumers supplied with the pure No. 1 Peruvian Guano at the lowest cash prices by
GRIFFING BROTHERS & CO.,
60 Courtland-st., New-York.

Bone Manure.

For sale by the Manufacturers, ground Bones of all grades of fineness for fruit trees, cropping, and top dressing; also Bone Sawdust and Superphosphate of Lime, all warranted pure and of the best quality. Address **A. LISTER & BROTHERS,**
Tarrytown, Westchester Co., N. Y.



ALLEN'S MOWING MACHINE.

This Machine has been for several years the leading Mower of the country. It has been often victorious in honest trials among intelligent farmers in the United States, than any other Mowing Machine. It has also become the leading Mower in GREAT BRITAIN AND FRANCE.

In every contest there it has easily beaten all its competitors. The Emperor Napoleon has ordered four for his private farms, and other eminent Agriculturists in Europe have given it the preference over all others.

It is celebrated for its light draft, perfection and rapidity of its work, simplicity, great strength and durability. A platform can be attached at the expense of \$10, which makes it the best and most economical reaper in use.

Price \$110, with full sets of extras, tools, &c.

Discount to Dealers. For sale by

R. L. ALLEN, 191 Water-st., New-York.

MALGAM BELLS.—Only one-third as much as Brass Composition, with tone and strength equal. Farm, School-houses, Shops and Hotels supplied, 30 to 250 lb. Bells at \$6 to \$25 each. Churches, Academies, Fire Alarm Bells, 1700 lbs. \$175; 925 lbs. \$100; 650 lbs. \$75; 460 lbs. \$55; 360 lbs. \$35; complete and warranted 12 months, with Yoke, Standard, Wheel and Trolling Clapper, and delivered at express offices, railroads, or steam boats.

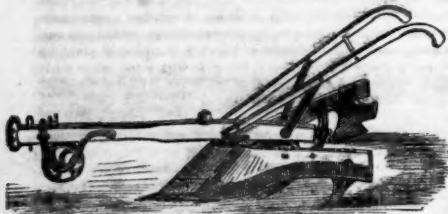
Also, People's Farm Mill, complete and warranted, \$10.

M. C. CHADWICK & CO., 17 Spruce-st., New-York.

Sugar Evaporator.

Cook's Patent for converting Sorghum, Cane, and Maple juice into finely granulated sugar in 30 to 60 minutes. This is the only successful Sorghum evaporator yet invented, and it possesses decided advantages over other evaporating pans for either maple or cane juice. For sale at the Agricultural Warehouse of

R. L. ALLEN, 191 Water-st., New-York.



Share's Patent Horse Hoe AND Hilling Machine.

A valuable, labor-saving Machine, especially for cultivating corn, or any crop requiring a plow or hoe between the rows.

PRICE \$10.

For circular with directions for using, address owners of Patent Right.

TREDWELL & PELL, 45 Fulton-st., N. Y.

SHARE'S PATENT COULTER HARROW.

SHARE'S PATENT PLANTER AND HOE.

For sale by R. L. ALLEN, 191 Water-st., N. Y.

HAY-HAY-HAY.

INGERHOLZ'S IMPROVED PORTABLE HAY PRESS, for packing Hay, Cotton, Rags, Hemp, Broom Corn, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their superiority, convenience and economy.

Price. Hay Press No. 1, \$30; wt. of bale 150 to 200 lbs. No. 2 \$75; wt. of bale 250 to 300 lbs. Cotton Press, \$150. Any sizes, and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

NEW-YORK AGRICULTURAL IMPLEMENT, Machine, and Seed Warehouse.

R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequalled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burt Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Grain Cutters, Presses, Pumps, Brick Machines, Carts and Wagons, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c. Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

HORSE POWERS AND THRESHERS.

—Endless Chain and Circular Powers of our own and other patterns, a large variety at manufacturers prices.

R. L. ALLEN, 191 Water-st., New-York.

Attention, Farmers!

From the unparalleled success of the Ketchum Machine the past season, I am induced to build for the harvest of 1860 a LARGER NUMBER THAN USUAL, and I offer them as the most perfect Machine I have ever manufactured, and at prices to correspond with the times.

HOWARD'S NEW TWO-HORSE MOWER—all Iron, light draft, no side draft, no driving fast to have them work well, no clogging. Price only \$100.

HOWARD'S NEW ONE-HORSE MOWER, is of light draft for one horse, and capable of cutting six to eight acres of any kind of grass per day. Price \$75.

Wood Frame Mowers, Two-Horse, Price \$80. Combined Mower and Reaper (Iron, with late improvements), best first premium at the United States Fair at Chicago last Fall, price \$130.

All the above Machines have Emery's adjustable Lever and Roller, and various other improvements, and are warranted. Send for Pamphlets. Address

R. L. HOWARD, Buffalo, N. Y.

HORSE POWER PITCH FORKS.

For unloading Hay or loose Grain in the Barn or on the Stack. It is an indispensable article to the Farmer. More than the cost of it can be saved every season. Price complete with pulley, ropes, etc. \$12. For sale by

R. L. ALLEN, 191 Water-st., New-York.

ALBANY TILE WORKS,

Corner of Clinton Avenue and Knox Streets, ALBANY, N. Y.

ROUND TILE.

1 1/2 inches round..... \$ 8 per 1000 feet.
2 1/2 12
3 15

HORSE SHOE TILE.

2 1/2 inches rise..... \$10 per 1000 feet.
3 12
4 15
5 18
6 20
7 1/2 25

SOLE TILE.

2 inches rise..... \$10 per 1000 feet.
3 12
4 15
5 18
6 20
7 25

Orders solicited. Terms cash.

TILE MACHINES MADE TO ORDER.

Address C. & W. McCAMMON, Albany, N. Y.

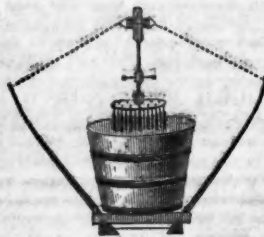
LONG ISLAND POTTERY AND TERRA COTTA WORKS

North 7th-st., Williamsburg. Depots 7 Court-st., Brooklyn, and 75 Nassau-st., New-York.

Glazed and vitrified stone ware drain pipes, of superior quality—2 foot lengths, 2 to 12 inches diameter, 2 c. to 35 c. per foot. Sweeps, Traps, and Branches at corresponding rates. Stock, catalogues and price lists as above. Orders promptly executed, and no charge for cartage. Also continually on hand Chimney Tops, Vases, &c. Call and examine.

EWD. H. QUINN, Proprietor.

Metropolitan Washing Machine.



Can be worked by a child—will save its cost by the wear and tear of clothes in a short time. After using three times you would not part with it for three times its cost.

For sale by

R. L. ALLEN, 191 Water-st., New-York.



AS IT APPEARS ON THE ROAD.

Buckeye Premium Mower, WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD, together with several important improvements added the present season.

The Machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left. The Cutter Bar is attached to the frame by a double Hinge Joint, which allows either end to rise or fall independent of the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the Machine.

When not in use, the cutters can be instantly folded over the front of the frame, rendering the Machine as portable as a common cart.

One of the strongest proofs of the success of the Buckeye is found in the fact that, since its introduction, so many other machine manufacturers have changed the construction of their own Machines, and introduced features in imitation of the Buckeye. Farmers are cautioned against allowing themselves to be deceived by these machines, as the desired advantages can not be secured without infringing the BUCKEYE PATENT.

Orders must be sent early to secure Machines. My unfilled orders of the last season amounted to several hundred.

JOHN P. BUCKEYE, Manufacturer and Proprietor, Pockepsie, N. Y., and Worcester, Mass.

Warehouse, 165 Greenwich-st., New-York.

ALLEN'S REAPING & MOWING MACHINE.

No REEL REQUIRED, as it will work perfectly without, thus saving the additional cost.

This is the LIGHTEST DRAFT.

The most SIMPLE IN CONSTRUCTION.

The LEAST LIABLE TO GET OUT OF ORDER.

The most ECONOMICAL machine ever made, and

WARRANTED TO GIVE ENTIRE SATISFACTION.

Price \$120 with full sets of extras, tools, &c.

A liberal discount to dealers. R. L. ALLEN, 191 Water-st., New-York.

Also a COMBINED MOWER AND REAPER with reel—

Iron driving wheel..... \$130

With large wooden driving wheel..... 135

Large six feet reaper and four feet driving wheel..... 155

THE DEEP BREAKING UP PLOW.

This Plow turns a furrow TWO FEET DEEP and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil Three Feet deep.

It is the most suitable Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tith. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about one-fourth the expense—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for Tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

In addition to the foregoing, I keep upwards of one hundred and fifty other kinds of Plows.

ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

HORTICULTURAL IMPLEMENTS—The largest and most complete assortment to be found in the United States.

FLOWER, FIELD, AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers,

R. L. ALLEN, 191 Water-st., New-York.

FAIRBANKS'



STANDARD SCALES.

ADAPTED TO EVERY BRANCH OF
Business where a correct and durable scale is required.
Every Farmer should have a Fairbanks' Scale.
Send for a Circular.

FAIRBANKS & CO.
189 Broadway, New-York.

WILLCOX & GIBBS FAMILY
\$30
SEWING MACHINE
Simple, Noiseless, and Warranted to
fill all the requirements of a
Perfect Family Machine.

Manufactured and Sold, Wholesale and Retail, by
JAMES WILLCOX,
No. 508 BROADWAY, opposite St. Nicholas Hotel,
New-York.

SAVE YOUR MONEY and preserve your
health.—A. BROWER'S Patent Composition makes and
keeps Boots and Shoes waterproof, and they will last as long
again for using it. For sale everywhere.
A. BROWER & CO., 4 Rende-st., New-York.

SOMETHING NEW.

B. T. BABBITT'S

BEST MEDICINAL SALERATUS.

Is manufactured from common salt, and is pre-
pared entirely different from other Saleratus.
All the deleterious matter extracted in such a
manner as to produce Bread, Biscuit, and all
kinds of Cake, without containing a particle of
Saleratus when the Bread or Cake is baked;
thereby producing wholesome results. Every
particle of Saleratus is turned to gas and passes
through the Bread or Biscuit while baking; con-
sequently nothing remains but common Salt, Wa-
ter and Flour. You will readily perceive by the
taste of this Saleratus, that it is entirely different
from other Saleratus.

It is packed in one pound papers, each wrapper
branded, "B. T. Babbitt's Best Medicinal Saleratus,"
also, picture, twisted loaf of bread, with a
glass of effervescing water on the top. When you
purchase one paper you should preserve the wrap-
per, and be particular to get the next exactly like
the first—brand an above.

Full directions for making Bread with this Sa-
leratus and Sour Milk or Cream Tartar, will
accompany each package; also, directions for
making all kinds of Pastry; also, for making Soda
Water and Sedlitz Powders.

MAKE YOUR OWN SOAP

WITH

B. T. BABBITT'S

PURE CONCENTRATED POTASH.

Warranted double the strength of ordinary Pot-
ash; put up in cans—1 lb., 2 lbs., 3 lbs., 6 lbs.,
and 12 lbs.—with full directions for making Hard
and Soft Soap. Consumers will find this the
cheapest Potash in market.

Manufactured and for sale by
B. T. BABBITT,
Nos. 61, 66, 68, 70, 72 & 74 Washington-st., N.Y.,
and No. 38 India-st., Boston.

Bee Hives.

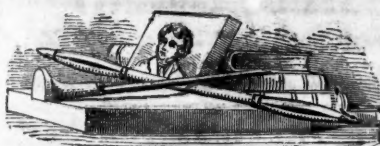
LANGSTROTH'S celebrated movable comb BEE HIVE.
Price \$5.
Langstroth's Book on the Honey Bee, \$1.25.
For sale by

R. L. ALLEN, 191 Water-st., New-York.

KEEP YOUR FEET DRY.

A. BROWER'S PATENT COMPOSITION
makes Boots and Shoes and all leather impervious to water,
will keep so; polish as well after, and last at least
half as long again for using it; which everybody ought to have.
Sold in New-York by:

Chaffin, Mellen & Co.; Carr, Howard, Sanger & Co.; Wells &
Christie; Ellis Bro. & Co.; Wescon & Co.; Wessens, Walter &
Co.; Wm. Bryce & Co.; Norton Jewett & Co.; Harmon, Hays &
Co.; S. R. Van Duzer & Co.; Prichot, Bruen & Seabury;
Walsh, Coulter & Co.; Chapman, Lynn & Noves; Blivin &
Mead; Lathrop, Lodington & Co.; C. W. & J. T. Moore & Co.;
J. H. Rankin & Co.; Benedict, Hall & Co.; A. B. Sands & Co.;
Floyd Clarkman; Graden McCready & Co.; Harrel, Risley &
Kitchen; Cook, Dowd, Baker & Co.; Gasheley & Davies;
Porogo, Bulkey & Plimpton; Freeland Symes & Co., and by all
Boot and Shoe, Hardware, Druggists, Grocers, and Yankee
Notion Houses. Send your orders.
A. BROWER & CO., No. 1 Rende-st., New-York



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pared to furnish on the most reasonable terms, and in the best
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&c., of Agricultural Implements, Horticultural and Scientific
subjects of every description.
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105 Nassau-st., corner of Ann-st., New-York.

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Cost of one pound Saponifier (in iron box) 25c.
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hours, with the Saponifier, which would ordinarily be
thrown away, or sold at one cent per pound, say..... 20c.

Forty-five cents, therefore, is the whole cost of fifteen gal-
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TRY IT!!!

It will clean type to perfection, and where a strong lye is
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To be had of all respectable druggists and storekeepers.

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Trade supplied and Circulars sent by addressing

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231 South Front-st., Philadelphia, Pa.

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E. R. DURKEE & CO., Proprietors, 181 Pearl-st., N.Y.

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imported into Philadelphia. After all my efforts to introduce the
pure breed, I should much regret the general diffusion of a false
one. Those who purchase, therefore, will benefit the public and
confer a favor upon me, by demanding to see a bill of sale from
me. The spurious breed is from an apiary in Germany, well
known to have impure race. My own are direct from the
mountains of Italy, where no other race is found.
Those who wish further information, will please apply for
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Flushing, L. I. S. B. PARSONS.

Italian Bees! Italian Bees!

I have as pure stock as there is in the world. I am now
making Queens daily—happy to see visitors every fair day.—
Queens ready to send out in all June—sent by express or pri-
vate conveyance. Price reduced from \$12.50 to \$10. Sent in
an observatory hive with minute directions for their manage-
ment.
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THOROUGH BRED NORTH DEVON

AND AYRSHIRE BULLS AND HEIFERS. I have
some fine young animals bred from Imported Parents, for sale
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Patent Attenuated Coal Tar.

For exterminating all kinds of Insects and Vermin in Field
and Garden, Patented March 27th, 1860. By this discovery
Coal Tar is wholly deprived of its viscid and sticky nature,
rendered perfectly clean to handle (it resembles fine gunpow-
der), and made universally applicable, from the tenderest
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6 pound boxes, for testing, \$0 50
In bags, 100 lbs. each 3 00
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To Farmers and Gardeners.

The subscribers offer for sale 60,000 barrels of poultice, made
by the Lodi Manufacturing Company, in lots to suit purcha-
sers. This article is in the twentieth year of its introduction
into this country, and has outlived fertilizers of every other de-
scription, for the following reasons:—

1st. It is made from the night soil of the City of New-York,
by the L. M. Co., who have a capital of over \$100,000 invested
in the business, which is at risk should they make a bad article.
2d. For corn and vegetables it is the cheapest, nearest, and
handiest manure in the world, it can be placed in direct contact
with the seed, forces and ripens vegetation two weeks earlier,
prevents the cut worm, doubles the crop, and is without disagree-
able odor. Three dollars worth or two barrels is all sufficient
to manure an acre of corn in the hill.
Price—1 bbl. \$2—2 bbls. 3.50—5 bbls. \$6, and over 6 barrels
\$1.50 per barrel, delivered free of cartage to vessel or railroad
in New-York City.

A pamphlet containing every information, and certificates
from farmers all over the United States, who have used it from
two to seventeen years, will be sent free to any one applying
for the same. GRIFFING BROTHERS & CO.,
North River Agricultural Warehouse, 60 Courtland-st., N. Y.

GUANO.

We would call the attention of Guano Dealers, Planters, and
Farmers to the article which we have on hand and for sale at
FORTY PER CENT LESS THAN PERUVIAN GUANO
and which we claim to be superior to any Guano or fertilizer
ever imported or manufactured in this country. This Guano is
imported by WM. H. WEBB, of New-York, from Jarvis & Ba-
ker's Islands, in the "South Pacific Ocean," and is sold gene-
rally and pure as imported. It has been satisfactorily tested by
many of our prominent Farmers, and analyzed by the most em-
inent and popular Agricultural Chemists, and found to contain
(as will be seen by our circulars) a large per centage of Bone
Phosphate of Lime and Phosphoric Acid, and other animal orga-
nic matter, yielding ammonia sufficient to produce immediate
abundant crops, besides substantially enriching the soil. It can
be freely used without danger of burning the seed or plant by
coming in contact with it, as is the case with some other fer-
tilizers; retaining a great degree of moisture, it causes the plant
to grow in a healthy condition, and as experience has proved,
free of insects. For orders in any quantity, (which will be
promptly attended to,) or pamphlets containing full particulars
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Jarvis and Baker Islands

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IMPORTED BY THE AMERICAN GUANO CO., N. Y.

This Guano, far superior to any other Fertilizer known, and
of permanent value to the soil, is sold by the Company at their
office, No. 66 William-st., in large or small quantities, at \$10
per ton. Liberal discount made to dealers.

Every package sold by the Company will be stamped with
their trade mark.

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full particulars and pamphlets, address

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No. 66 William-street, New-York.

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Bone Dust.

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Land Plaster.

Poudrette.

For sale at lowest market price, and in quantities to suit.
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SUPER-PHOSPHATE OF LIME,

BONE DUST.

For sale in quantities to suit purchasers at the lowest market
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To Dealers in and Consumers of

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BEWARE of whom you purchase your FERTILIZERS.
Second hand Guano Bags, with the Peruvian Government
Stamp, are in demand, and are bringing extremely high prices,
for the purpose of mixing Peruvian with worthless guano, and
selling it for a pure article. We purchase our Guano direct
from the Peruvian Government Agents, and can not therefore
be imposed upon. Dealers and consumers supplied with the
pure No. 1 Peruvian Guano at the lowest cash prices by
GRIFFING BROTHERS & CO.,
60 Courtland-st., New-York.

Bone Manure.

For sale by the Manufacturers, ground Bones of all grades of
fineness for fruit trees, croppings, and top dressing; also Bone
Sawdust and Superphosphate of Lime, all warranted pure and
of the best quality. Address A. LISTER & BROTHERS,
Tarrytown, Westchester Co., N. Y.

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SEED PREMIUMS FOR JUNE.

ROOTS! ROOTS!! ROOTS!!!

FILL UP THE VACANT SPOTS.

When the regular planting is over, there will be found on every farm, and in almost every garden, some vacant spots where a few turnip seeds may be scattered, and instead of a crop of weeds, there may be raised a lot of nice turnips for the table, as well as for feeding in Fall, Winter, and Spring. We have provided a small extra lot of seeds of three of the best kinds of turnips, which we now propose to offer as premiums to those who will procure and forward new subscribers. Viz:

(No. 71) Long White French Turnip, as improved and grown by J. E. Macomber, Newport Co., R. I. This we have found the best table turnip, and the best keeper we have ever known. May be sown from June 1st, to August 1st. (See page 167.)

(No. 17) Red Strap-Leaf Turnip—a good turnip, and the quickest growing kind we have ever raised. It may be sown at almost any time from April to August, and comes quickly to maturity.

(No. 6) Ashcroft's Swedish Turnip—one of the best of the Swede turnips or rutabagas. May be sown from June 1st, to July 15th, the earlier now, the better.

To any person now sending a new subscriber, and \$1, we will present, when desired, a post-paid parcel containing one-eighth of a pound of the seed of the above turnips. This quantity of seed with careful sowing, will suffice for 40 to 50 square rods, and yield from 50 to 200 or more bushels of turnips, the amount of crop of course will depend upon the goodness of the soil, the time of sowing, and the Autumn weather. The seed we will send post-paid except to the Pacific Coast and Canada. When to go to either of those localities, the recipient will need to send 7 cents extra postage for each half ounce of seed desired. (N. B.—If new subscribers are sent in as members of old or new clubs, and at club prices, the receiver of the premium will be expected to forward the postage on the seed, viz., 12 cents, if the full two ounces are desired.)

In addition to the above, an extra half ounce will be presented to the new subscriber himself, if the usual post-paid (3-cent stamp) envelope be provided for sending it in.

Premium Notice—Special.—When names are sent in on which any premium is desired, the sender should always give plainly the number of the premium expected. When this is not done, of course our clerks can not forward any premium, as they do not know what to send. This will explain the non-reception of premiums in a few cases which have already occurred.

New Premium—Portable Barometer.

It will be seen by reference to page 187, that our premiums for subscribers obtained for Vol. XIX (1860), are still open, so that those who have not yet completed their lists can still do so. It will be understood that these premiums are limited only to subscribers for the complete volume; that is, all names obtained at any time during the year, for the entire volume of this year, may be counted, in making up a list of names for a premium. We can not, of course, add together a few names obtained during different years. Two half year subscriptions may be counted as one whole year.

A New Premium (No. 28) is also added this month, viz.: Kendall's Aneroid Portable Barometer. Upon the strong recommendation of Prof. Silliman, of Yale College, we purchased one of these instruments several weeks since, and have very frequently compared it with a costly standard mercurial barometer at Blunt's establishment. We find it remarkably accurate, and from what we have seen of this and other instruments of the same kind and manufacture, we are prepared to recommend them. The state of the atmosphere is shown by means of springs instead of by the troublesome mercurial column and cup, so that it is easily carried in any position, and is not in danger of getting out of order. A barometer indicating approaching changes in the weather, is almost as valuable to the farmer, as to the mariner, and we believe most farmers would find \$10 well invested in purchasing one of these instruments. We shall keep an extra instrument or two on hand for premiums, and to dispose of those who can not get them more conveniently from dealers.

The General Seed Distribution Closed.

ITS EXTENT AND RESULTS—PREPARATION FOR NEXT YEAR—MISTAKES AND LOSSES.

The season is so far advanced that we can now close up our General Distribution of free seeds to subscribers for the present. This is very opportune for us, as the large demand has very nearly run out all our immense stock of seeds provided for this year—amounting to about a quarter of a million packages! This distribution has involved a great amount of care, labor, and expense, but the work has been voluntarily and very cheerfully done, and we shall, for the rest of the season, have the satisfaction of knowing that there are all over the continent, from Nova Scotia to California, Oregon, and Washington Territory, a vast number of plots of good vegetables and beautiful flowers growing, that would not be in existence but for the "Agriculturist Seed Distribution." And further, as most of these seeds are annuals, they will reproduce themselves the present year, and be redistributed to a multitude of other homesteads during the next season. So much for this year. We are already preparing for next year, as we are raising several varieties ourselves, and others are being grown for us; and we shall also import a large stock from Europe for free distribution in 1881.

A few mistakes have, perhaps, occurred in putting up so many parcels of so many kinds, though the most vigilant care has been exercised to secure all possible accuracy. And no doubt there have been some losses in the mails. But we trust these have been comparatively very few in number. Nothing that could be done to avert such mistakes and losses, has been left undone, and whenever apprised of the non-reception of seeds, we have always promptly made good the loss.



Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will, of course, be sent to added names.

American Agriculturist.

(DISTINCT ENGLISH AND GERMAN EDITIONS.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c. &c.

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All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD, No 189 Water st., New York